



جامعة قطر  
QATAR UNIVERSITY



# GRADUATE CATALOG 2021 - 2022

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## CHAPTER 1.

### ABOUT QU

Qatar University (QU) is Qatar’s most prominent and sole national institution of higher education. It is a beacon of academic and research excellence, providing the widest range of educational programs and degrees in Qatar.

#### Background

In 1973, recognizing the importance of education to the country’s expanding society, the Emir of Qatar issued a decree proclaiming the establishment of Qatar’s first national College of Education. In its first year, the college admitted 57 males and 93 female students. After several semesters, the rapid development of the country made it necessary to expand to accommodate new areas of specialization.

In 1977, QU was founded with four colleges -- Education, Humanities and Social Sciences, Sharia, Law and Islamic Studies, and Science. By 1985, two additional colleges -- Engineering, and Business and Economics -- were added.

By Fall 2005/06, the number of male and female registrants for study at QU reached 7,660.

Today, QU has more than 18,000 students, a 17:1 student-faculty ratio, and hosts nine colleges: Arts and Sciences (CAS); Business and Economics (CBE); Education (CED); Engineering (CENG); Health Sciences (CHS); Law (LAWC); Medicine (CMED); Pharmacy (CPH); and Sharia and Islamic Studies (CSIS).

The College of Health Sciences was a new addition in January 2016, emerging from the Health Sciences Department formerly housed in the College of Arts and Sciences. Following this, a Health Education Cluster comprising the colleges of health sciences, medicine and pharmacy, and QU Health Clinic was established to promote interdisciplinary and inter-professional collaboration, and to enhance the quality of health education and research as well as institutional effectiveness at the University.

#### Vision

To be regionally recognized for distinctive excellence in education and research, an institution of choice for students and scholars and a catalyst for the sustainable socio-economic development of Qatar.

### Mission

Qatar University is the national institution of higher education in Qatar. It provides high quality undergraduate and graduate programs that prepare competent graduates, destined to shape the future of Qatar. The university community has diverse and committed faculty who teach and conduct research, which addresses relevant local and regional challenges, advances knowledge, and contributes actively to the needs and aspirations of society.

### Transformation

At the beginning of the academic year 2015-2016, QU announced its readiness for an era of transformation with the aim to grow from the phase of academic comprehensiveness, and focus instead on excellence and leadership in niche areas, as well as play an increasing role in supporting Qatar’s economic and social growth and development. In this regard, a new strategic plan is being developed to reflect the new aims and objectives.

The new phase is about building on the reform and turning it into transformation through five fundamentals which are: to promote educational and research excellence, promote institutional effectiveness, advance knowledge, maximize impact on students and society, and drive innovation.

In 2016, QU established its new organizational structure aimed at improving efficiency and strengthening capabilities in administrative and academic functions.

### Faculty

QU ensures that its teaching/learning environment is of the highest standard, and selects distinguished academics of wide-ranging experience and international reputation to its faculty body.

These include professors, associate professors, and assistant professors who are supported by lecturers and teaching assistants. Visiting professors also bring added expertise to students’ academic experience.

In addition, experts appointed to Chair positions at QU facilitate graduate research and training activities in conjunction with industry companies to provide students with hands-on experience at field and work sites.

### Students

The University’s student body is 75% female, 25% male. Qataris comprise the majority, with the remaining non-Qataris

coming from 90 countries, mostly from the Arabic-speaking world.

The number of QU alumni stands at more than 41,000. The institution has also graduated a list of distinguished alumni including QU’s 5<sup>th</sup> President Prof Sheikha Abdulla Al-Misnad Class of 1977 and H.H. Sheikha Mozah Bint Nasser, Chair of Qatar Foundation, Class of '86, as well as some of Qatar’s leading figures in finance, education, social affairs, health, culture and the arts, sports, industry and media.

### Academic System

The academic system includes two semesters -- Fall and Spring, and the coursework is measured in credit hours. The academic year includes 16 weeks of study in addition to a summer session. Credit hours are established depending on the scope of the course.

The normal duration of the course of study at QU may vary according to each program’s requirements. However, the length of study may not exceed eight years from the date of enrollment at the undergraduate level and four years from the date of enrollment at the graduate level. This excludes the period spent in the Foundation Program.

A degree is awarded to each student who has fulfilled all the academic requirements of his/her program with a minimum cumulative GPA of 3.00 over 4. Graduation ceremonies are held annually.

### Academic programs

With 79 specializations, QU offers the widest range of academic programs in Qatar tailoring them to meet the needs of Qatari society -- 45 Bachelors, 27 Masters, 19 doctoral programs, 4 Diplomas, 4 certificate and 1 PharmD.

#### Graduate programs at QU:

##### Arts and Sciences (7)

PhD in Biological and Environmental Sciences

PhD in Gulf Studies

Master of Arts in Arabic Literature and Language

Master of Arts in Gulf Studies

Master of Science in Applied Statistics

Master of Science in Environmental Sciences

Master of Science in Materials Science and Technology

Graduate Certificate in Corrosion

Graduate Certificate in Environmental Sciences

Graduate Certificate in Applied Statistics

##### Business and Economics (4)

Master in Business Administration (MBA)

Master of Accounting

Master of Science in Marketing

PhD in Business Administration

##### Education (7)

Diploma in Early Childhood (Frozen for 2017/2018)

Diploma in Primary Education

Diploma in Secondary Education

Diploma in Special Education

Master of Arts in Curriculum, Instruction and Assessment

Master of Education in Educational Leadership

Master of Education in Special Education

##### Engineering (8)

Master of Science in Civil Engineering

Master of Science in Computing

Master of Urban Planning and Design

Master of Science in Electrical Engineering

Master of Science in Engineering Management

Master of Science in Environmental Engineering

Master of Science in Mechanical Engineering

PhD in Engineering-Architecture

PhD in Engineering-Chemical Engineering

PhD in Engineering-Civil Engineering

PhD in Engineering-Computer Science

PhD in Engineering-Computer Engineering

PhD in Engineering-Electrical Engineering

PhD in Engineering-Engineering Management

PhD in Engineering-Environmental Engineering

PhD in Engineering-Industrial and Systems Engineering

PhD in Engineering-Materials Science and Engineering

PhD in Engineering-Mechanical Engineering

PhD in Engineering-Urban Planning

##### Law

Master of Law in Public Law

Master of Law in Private Law



Graduate Certificate in Legal Studies

### College of Medicine

Ph.D. in Medical Sciences

### College of Pharmacy

Ph.D. in Pharmaceutical Sciences

Doctor of Pharmacy (Full-time)

Master of Science in Pharmacy (Full-time)

College of Sharia and Islamic Studies

P.h.D. in Fiqh and Usul Al-Fiqh

Master of Fiqh and Usul Al-Fiqh

Master of Quranic Sciences and Exegesis

Master of Religions and Dialogue of Civilizations

### College of Health Sciences

PhD in Biomedical Sciences

Master of Public Health

Master of Science in Biomedical Sciences

Master in Genetic Counselling

QU continues in its efforts to provide an inspiring teaching/learning environment that ensures student success. The organization has expanded its classroom and campus infrastructure by establishing new research labs, environment-friendly buildings and well-equipped library facilities, as well as modern technology-enabled resources such as lecture-capture, Blackboard, CiscoWebEx, and special needs assistive technologies.

## Language of instruction/communication

All graduate programs are taught in English, except Law and Sharia, this is in addition to the programs that were already offered in Arabic. All graduate programs are taught in English, except masters programs at college of Education, masters programs at college of Law, master programs at college of Sharia and master of Arabic program at college of arts and sciences this is in addition to the programs that were already offered in Arabic.

Students entering programs which are taught in Arabic will no longer require Foundation or English proficiency tests as entry criteria, unless it's mentioned in the admission criteria. However, for the engineering, pharmacy, health science, Medicine and science disciplines, instruction continues to be in English and students are required to satisfied English proficiency test as entry criteria.

QU continues to uphold its responsibility to promoting Arabic language, history, culture, and traditions through the

programs offered by the College of Sharia and Islamic Studies and the Arabic Language Department in the College of Arts and Sciences, as well as through various annual events such as Arabic Language Day and Cultural Village.

Arabic remains the official language of administrative communication at QU.

In addition, the Arabic for Non-Native Speakers Center (ANNS) at the College of Arts and Sciences (CAS) continues to provide foreign students with Arabic language skills and introduces them to Arab and Islamic history and literature, and Qatari culture. The Center offers a year-long intensive Arabic-language course. Information on the Center can be accessed at: <http://www.qu.edu.qa/artsscience/anns/about.php>

## Accreditation

QU is committed to providing high-quality education in areas of national priority. Underpinning this commitment is the goal to align its colleges, programs, and courses with established international standards and best practices. As a result, the organization has been successful in its accreditation initiatives, earning the endorsement of numerous leading international accrediting bodies such as ABET, CCAPP, AACSB, to name a few, the most recent of which were the accreditation awards achieved by the colleges of Education and Law.

## Research

QU considers research a priority area for the benefit of its students, the University as a whole and the wider Qatari community. This is evidenced by the incorporation of research in every aspect of the academic experience and is buoyed by the success the organization continues to join in the National Priorities Research Program (NPRP).

The organization's research focus is reflected in its annual Qatar University Research Forum (QURF), in which faculty and students present their research projects and collaborative studies.

The institution's vibrant research culture is further enhanced by the establishment of a state-of-the-art research complex and 14 research centers of excellence -- Animal Laboratory Research Center (LARC), Biomedical Research Center (BRC), Central Laboratories Unit (CLU), Center for Advanced Materials (CAM), Center for Entrepreneurship (CFE), Ibn Khaldon center, Center for Sustainable Development (CSD), Environmental Studies Center (ESC), Gas Processing Center (GPC), Gulf Studies Center (GSC), KINDI Center for Computing Research (KINDI), Qatar Mobility Innovations Center (QMIC), Qatar Transportation and Traffic Safety Center (QTTSC), and Social and Economic Survey Research Institute (SESRI). They are the first in Qatar and

reflect the responsibility and commitment of the University to support research that is responsive to national needs.

An ambitious research 5-year roadmap entitled "Advancing Research for Qatar's Future" launched in 2014, fields four priority research areas -- Energy, Environment & Resource Sustainability; Social Change & Identity; Population, Health & Wellness; and Information, Communication & Technologies (ICT) -- and is further reflection of QU's engagement in national research priorities.

QU academic and research profile is further strengthened through signed agreements, academic collaborations and partnerships with industry, government, academia, business and civil society. This is in line with the organization's strategies towards improving student outcomes and maximizing their potential, enthusiasm, talent, and creativity. These agreements also engender Chair positions on issues that are of national, regional and international importance. Incumbents of these positions provide guidance and support to students preparing graduate and research projects and boost opportunities for their field experience and engagement in the world of work.

## Community engagement

The University prides itself on the quality of its students, and is committed to ensuring that campus life is an enriching environment for encouraging academic excellence, volunteerism, civic responsibility, and leadership.

Community engagement is an area which is at the heart of QU's mission and vision. It has demonstrated this commitment through the establishment of the Center for Volunteerism and Community Service in 2016 with emphasis on leadership, sharing, caring, and appreciation of diversity. The Center brings together all QU volunteering programs in a structured way to provide volunteer services that best match students' skills and interests to the needs of a particular organization or event.

The organization also reinforces its position as a driver of social development through the services it offers to members of the community such as education and training in various disciplines through professional development programs at its Continuing Education Office, College of Pharmacy, and College of Law.

QU students continue to take the lead in organizing and participating in volunteering and charitable activities such as health awareness events, charity drives, National Day celebrations, National Sports Day observances, and blood donation campaigns, to name a few.



## CHAPTER 2.

### CAMPUS SERVICES

#### The Campus

Qatar University is situated on the northern edge of Doha, approximately 16 kilometers from the center of the city. In addition to the main campus, the University has an experimental farm located 65 km north of Doha.

QU's main campus is built on a total area of approximately 8 square kilometers, with architecture which integrates distinction and modernism with the ideals of traditional Qatari design. Students enjoy a wide range of services offered on campus to enrich their academic and social experiences. Many of these services can be utilized by students whether during the day or after class hours, and students are encouraged to reach out for these excellent resources.

#### Information Technology

Information Technology Services is committed to the provision of the best infrastructure, applications, and services to faculty, students and staff of Qatar University. All QU students, faculty and staff are given secure access to the following University services:

**myQU:** myQU is the University's web portal, a web-based tool that provides centralized access to e-mail, calendars, administrative services and classroom tools, and information through a single username and password. To access myQU, use a web browser to go to <http://my.qu.edu.qa> and log in with your QUID and password.

**myBanner:** Banner is an effective information system providing students, faculty and staff with online access to course registration, Drop and Add services, class schedules, grade viewing, and online tuition payment.

**Email:** The University provides all students, faculty and staff The University provides all students, faculty and staff with a University email account. This account can be accessed via standard email clients as well as through the myQU portal. The QU e-mail account is the official form of communication between QU and students; therefore, students are expected to access their QU e-mail frequently.

**Blackboard:** Blackboard Learning System is a course management system that provides students with course materials, discussion boards, virtual chats, online assessment and a dedicated academic resource center. Students can login to Blackboard using their QU ID accounts at: <http://elearning.qu.edu.qa>

**Wireless Network:** The campus wireless network is the largest wireless network at any campus in Qatar and allows students, faculty, and staff to connect to the internet from any point on campus

**Help Desk:** The IT Services Helpdesk assists students with questions related to laptop and desktop computing, remote access issues, connecting to the QU network, password and login information, email, virus and spy-ware issues.

**Lecture Capture Software:** To enhance the university teaching and learning experience, many lectures are captured using lecture capture software (echo360R). Lecture capture is available to the students and faculty as a streaming media file via Blackboard after each class. Lectures are posted permanently, so students can refer back to a particular lecture at any time during their tenure at QU.

**BYOD:** Students, Faculty and Staff can use "Bring Your Own Device" services at QU. Users can register and connect up to four different wireless devices to the QU WiFi system.

#### IT Helpdesk contact information:

Phone: (+974) 4403-3456

Email: [helpdesk@qu.edu.qa](mailto:helpdesk@qu.edu.qa)

Website: <http://its.qu.edu.qa/>

Hours: 7:30am – 7:30pm, Sunday – Thursday

8.00am- 3.00pm Saturday

#### Facilities And Resources

##### Athletics

Qatar University provides students, faculty, staff, and the Qatari community with a wealth of athletic and recreational facilities to enrich their academic experience. Equipment, play courts and coaching are available for many popular pastimes. QU supports several sports facilities including the stadium, the aquatic complex which offers a variety of cardiovascular machines, free weights, and weight machines, and a women's sports facility that hosts a wide range of games and activities, and contains a gymnasium.

All facilities are open weekdays from 8:00 am to 10:00 pm. For further information, please contact the Sports and Recreational Section at [sports@qu.edu.qa](mailto:sports@qu.edu.qa) or 4403-3800.

##### Banking

Students and employees are offered convenient access to banking services through two local bank branch offices and several ATM machines in key locations on campus. Qatar

National Bank (QNB) and Al-Rayyan Bank both offer a full range of services, and their campus branches are open weekdays from 8:00 am to 1:00 pm.

##### Bookshop

The Bookshop, located in the Food Court Building on the women's, section sells a wide selection of stationary and classroom supplies, study and research aides, paints & art materials, Arabic and English language books, and magazines and computer equipment. The bookshop also offers a copy service.

##### Textbooks

The Textbooks Hall provides faculty and students with text books designed to support course curriculum. As part of a University-wide initiative to boost learning skill acquisition and enhance research, QU provides a subsidy that equals 50% of the total price for text books costing more than QR 50. For more information, please see: <http://www.qu.edu.qa/students/services/textbooks>

##### Food Services

Qatar University offers extensive dining facilities across its campus, with services catering to a large variety of tastes and preferences. The women's section has a Food Court and 14 cafeterias. The men's section has 9 separate cafeterias. There are international café's on campus, including Starbucks, Coffee Time, Coffee Bean & Tea Leaf and Costa.

Main office: Food Court, Mezzanine Floor, Office #2

Phone: 4403-3865 /5970 /5975

Email: [foodservices@qu.edu.qa](mailto:foodservices@qu.edu.qa)

Twitter: @QUFSS

Facebook: [www.facebook.com/QUFSS](http://www.facebook.com/QUFSS)

Working hours (Food Services Section): Sunday – Thursday, 7:30am – 2:30pm

Working hours (Dining Outlets):

Cafeteria	Opening and Closing Time
<b>Women</b>	
Women's Main Building 106 &161	7:00 am – 7:00 pm & 7:00 am – 6:30 pm
College of Arts and Sciences-1 & 2	7:00 am – 7:00 pm & 7:00 am – 4:30 pm

Women's Activities Building	7:00 am	4:30 pm
Parking Lot	7:00 am	7:00 pm
Sports Facility Building	7:30 am	4:00 pm
College of Business & Economics	7:00 am	8:30 pm
College of Education	7:00 am	7:00 pm
Female Activities	7:00 am	4:30 pm
Food Court	7:30 am	7:00 pm
New Library	7:00 am	9:30 pm
<b>Men</b>		
College of Engineering: Corridor08	7:00 am	8:00 pm
Men's Main Building- 135 & 138	7:00 am – 7:00 pm & 7:00 am – 4:30 pm	
Men's Activities Building	7:00 am	6:00 pm
Men's Foundation Building	7:00 am	4:00 pm
College of Business & Economics	7:00 am	8:30 pm
Water Complex	9:30 am	9:00 pm
New Library	7:00 am	9:30 pm

##### Computer Labs

A large number of academic computer laboratories are available throughout campus for student research and assignments. Students should contact academic departments directly for specific information regarding individual college computer labs and resources.

##### Copying & Printing Center

Qatar University provides copying and printing, laminating, and scanning services at the copy centers, which are located in both the Women's and Men's Activities Buildings and Library



Building. Students may also request copying and printing service online via the myQU Portal.

For more information, please see:

<http://www.qu.edu.qa/students/services/auxiliary-services>

### Internet Lounges

Internet lounges are available to students in both the Women’s and Men’s Activities Buildings. The internet lounges also offer wireless connectivity and are open weekdays from 8:00 am to 5:00 pm. For more information, see: <http://www.qu.edu.qa/students/services/auxiliary-services>

### Lockers

Qatar University provides lockers in various buildings in the men’s and women’s sections.

For more information, please see:

<http://www.qu.edu.qa/students/services/auxiliary-services>

### Student Campus Card

The Student Campus Card is a part of the One Card program which is used mainly on campus as an identification card and for other important purposes, such as: accessing the University facilities, checking out library materials, purchasing books at University Book Store, registering for any services at QU.

For additional information, please see: <http://www.qu.edu.qa/students/services/auxiliary-services>

### Mosque

The University mosque serves not only as a religious and spiritual center, but a striking visual landmark and a beautiful reminder of the country's traditions and heritage. Although the women's campus does not have a central mosque or prayer facility, prayer rooms are available in many of the buildings. These rooms are appropriately furnished for prayer services and reserved for women.

### Post Office

The on-campus Post Office is a branch of Q-Post, which offers a variety of solutions to meet student and employee mailing needs, whether they are sending urgent or valuable mail, parcels or international mail. This office is located in the Women's Activities Building.

## Research Units, Centers And Institutes

Qatar University is committed in its steadfast pursuit of scientific advancement, and hosts a large (and growing)

number of cutting-edge research centers and facilities equipped to make meaningful contributions to regional and global progress.

### Center for Advanced Materials (CAM)

The Center has been established as a multi-disciplinary research and resource center, bringing together state-of-the-art instrumentation, facilities and expert personnel. CAM is the hub of materials science and engineering research activities in Qatar, with the goal to develop a knowledgebase in design, synthesis, and characterization, as well as intelligent processing of advanced materials.

Driven by the needs of potential technological applications, CAM concentrates on applied research in the areas of Nanotechnology, Composites, Corrosion, Construction materials and life cycle assessment. The Center also implemented an integrated graduate training program that emphasizes both materials synthesis and characterization techniques covering a broad spectrum of materials and experimental probes. Furthermore, CAM offers community services as well as professional training courses to industry, for which details and applications are available at the Center’s website:

<http://www.qu.edu.qa/offices/research/CAM/index.php>

### Environmental Science Center (ESC)

The ESC is the oldest research center in the region established in 1982 to focus on the study of the components of the natural ecosystem, with special focus on the marine environment. The Center is often contracted by government or private agencies outside QU for consultation and to conduct environmental impact assessment studies of big industrial and domestic projects. The Center is equipped with cutting-edge analytical equipment and state-of-the art research vessel (Janan) for marine surveys and research. The center also hosts a large database of maps and audiovisuals of the natural heritage of the country. The ESC hosts and supports graduate students in all fields of environmental science and engineering.

### Gas Processing Center (GPC)

The GPC is supported by a large industrial consortium of national and multi-national companies and addresses the problems, challenges, and opportunities facing Qatar’s gas processing industry. The Center conducts research and development in areas pertinent to the consortium members’ needs and directs its resources towards two areas; asset management/process optimization, and sustainable development. The GPC offers extensive training programs and engages with the broader community through its annual GASNA competition and conferences.

### KINDI Center for Computing Research (KINDI)

The KINDI Center facilitates and supports Computer and Information Science and Engineering research at Qatar

University by fostering quality research programs to tackle relevant issues, while engaging the QU critical mass of researchers and students, and leveraging existing local and international partnerships. KINDI conducts world-class research while serving the QU community, as well as Qatari Society. The name KINDI is an acronym for Knowledge Intelligence, Networked Data and Interdisciplinary research, which are the broad themes of the Center. KINDI is also the name of a renowned Muslim Scientist (ابن يعقوب يوسف أبو إسحاق الكندي) who was a physicist and a pioneer in the area of cryptography; signifying the two KINDI areas of strength in bio/health informatics and cyber security.

### Central Laboratory Unit (CLU)

The CLU provides analytical and technical support and consultancy to serve research activities and testing needs. The Unit also works to optimize and upgrade the practical performance of technical staff and students, as well as to provide hands-on experience on using the analytical instruments for university members.

### Office of Academic Research (OAR)

Established in 2007, the OAR reports to the Office of the Vice President for Research. The OAR plays a significant role in supporting faculty members in the preparation and submission of proposals, sources and opportunities of funding, review of budgets, compliance with University and sponsor policies and procedures and promoting technology throughout the University.

### Office of Quality Management (OQM)

The OQM was established to ensure consistent management policies and practices across all the research centers/ units of the research sector, initiate a linkage between the testing and quality control results, encourage best practice sharing experiences, and eliminate duplication of efforts. The Unit helps the centers and units on their journey toward performance excellence. To achieve great performance, the Office works with research centers and units to ensure the best investment in terms of human assets and infrastructure, and to envision Qatar University mission to provide our customers with best quality services.

### Social and Economic Survey Research Institute (SESRI)

Reporting directly to the Office of the President, the SESRI was established in 2008 with a mandate to conduct high quality survey research on issues related to the development and welfare of Qatari society in the social, economic, and cultural areas. With a sophisticated Survey Operations Unit and an experienced staff of researchers and research assistants, SESRI conducts national and regional studies utilizing best practices in survey research. It provides faculty and interested students with a platform to collaborate on diverse projects with topics ranging from education and social and political values to gender, health, and labor migration. In May 2015, SESRI

launched its new Policy Unit with the aim of filling the gap in publicly-available, empirically-based policy analysis. The SESRI Policy Unit will complement the Institute’s existing research efforts by synthesizing, probing more deeply, and analyzing from a different perspective the Institute’s expansive inventory of individual-level survey data. Additional information is available on the QU website at: <http://www.qu.edu.qa/research/sesri/data%E2%80%9393center>.

### Center of Community Service and Continuing Education (CCE)

The CEO is a link between the University and society. The Office identifies and meets the actual training needs of society through specialized training programs, in addition to preparedness programs for professional and international certifications. It enables the greater community to benefit from the expertise, experience and resources available at the university.

Since its inception in 1995, the CEO has provided tailor-made continuing education courses and training workshops, in cooperation with various academic departments. For years, these training programs, based on actual needs of society, reflect the growing demand by individuals and institutions for further programs established by the office.

The following programs are offered:

#### General

Courses are offered in English (business or general) and Arabic. These are available to both the QU community and the public at large. Registration and course documentation are available online.

#### Contract (Special)

Specific courses are tailored for government or private agencies. A minimum number of attendees must be present, and the course is not open to anyone outside that particular organization.

#### Certification Programs

A number of helpful certification programs (CPA, ICDL, etc.) are available for employment qualifications and enhancing personal proficiency. These are available to the public, and may be studied for individually, at home.

For more information on these programs and how to apply, please visit the Continuing Education Office Website: <http://www.qu.edu.qa/cce>.

## Library

As an institution committed to academic excellence, as well as the preservation and expansion of Arabic culture, Qatar University maintains a robust library system to meet the needs of students, employees, and the Qatari community.

The new Library building was inaugurated in October 2012, and was designed to parallel QU expansion in its majors and number of students. It is located in the newly developed part of campus. It has five floors, and designed to hold a maximum capacity of 1 million text volumes. The Ground and first floors are designed for female students, faculty members, staff, and visitors, while the second floor is designed primarily for male students.

The QU Library has locations on both the men's and women's sections of campus, with a large new facility also underway. University faculty, staff and students are able to check out, reserve, and even request books from other libraries through interlibrary loan services. Photocopy and computing services are also available during standard library working hours, from 7:30 am – 7:30 pm.

The QU Library also features a prominent set of E-Resources, including subscriptions to many renowned Journals, E-books, and other electronic publications. These resources may be freely accessed anywhere. Additional information is available at: <http://library.qu.edu.qa>

## Medical Clinic

The clinic at QU is an outpatient clinic staffed by physicians, nurses and pharmacists who provide medical care to students, faculty and staff of the University, in accordance with policies set by the Qatar Supreme Council of Health.

A team of dedicated staff is constantly on hand, working to secure the safety and well-being of the university's attendants, as well as contributing to health education and awareness programs.

### Services

In order to best address the needs and health of the University's attendants, the clinic is continuously expanding the scope of its services. Presently, the following are addressed:

1. Emergency medical response at accident sites.
2. Transfer of urgent or critical medical cases to Hamad Hospital emergency ward, accompanied by a clinic nurse.
3. Routine medical procedures for patients, including medical checkups, diagnosis and prescription of treatments.

4. Antenatal healthcare to promote the health of the mother and her fetus during pregnancy.

5. Healthcare program to the children at the Childhood Center.

6. Referral of patients to different specialist clinics approved by the Supreme Council of Health.

7. Medical support during the exam periods, campus events and graduation days as required.

8. Contributing to University-wide Health Education and awareness programs.

### Location, Working Hours, and Contact numbers

Emergency number: (974) 4403 **5050**

**Main Clinic:** Located in the women's section at the main square. The clinic currently accepts walk-ins and appointments for female students and employees; anyone may call the clinic to request support at their location.

Working hours: 7:30am – 7:30pm

Phone: (+974) 4403 3294

Fax: (+974) 4403 3286

**College of Arts and Sciences Clinic:** Located in the women's College of Arts and Sciences building (at the main entrance), where nurses are available to provide basic medical services.

Working hours: 7:30am – 2:30pm

Phone: (+974) 4403 3295

**Men's Clinic:** Located in the Men's Student Activities building (on the ground floor), where nurses are available to provide basic medical services.

Working hours: 7:30am – 2:30pm

Phone: (+974) 4403 3287

## Student Housing

Students attending Qatar University are eligible to apply for student housing. The University provides a safe and secure environment for students to enjoy their academic experience away from home. A purpose-built, state-of-the-art student housing and learning community is under construction and will soon provide on-campus housing to students.

At present, student accommodation is off-campus, offering a convenient location, positive learning environment and scheduled transportation to-and-from the university. Rooms are fully furnished and offer comfortable and practical living space for active students. Lounges and common areas are located throughout the building, enabling students to get together for studies and recreation. A computer lab is also available.

In order to ensure the best possible experience for everyone, QU has implemented guidelines and safety policies, which can be found online: [http://www.qu.edu.qa/offices/housing\\_department/student-housing](http://www.qu.edu.qa/offices/housing_department/student-housing)

## Campus Parking

Many parking lots are available for vehicles of faculty, staff, students and visitors, including areas designated specifically for students or employees. The University has prepared for the expansion of campus by adding more parking spaces, and reducing walking distances to the premises wherever possible.

## Campus Security & Safety

The Department of Security and Safety is committed to providing students with a safe learning environment while keeping the university community informed about campus security. Visitor permits are issued to individuals, companies, alumni and conference attendees. Car permit is also issued for all students. For additional information, refer to website at:

<http://www.qu.edu.qa/offices/FacilitiesGeneralServices/Organization-Structure/HSSE->

### Lost and Found

Responsible about taking care, delivery of the lost and found items inside the QU campus. There are two ways to report a claim, either by visiting the primary services section in activities building, or by filling an online claim form via the QU website. For more information, please see: <http://www.qu.edu.qa/students/services/auxiliary-services>

## Transportation

Qatar University provides the following transportation services:

Bus transportation between the student residences and the university for men and women.

Bus transportation for scientific and educational trips organized by various university departments.

Campus Express: This is a free shuttle bus service that safely transports students around campus.

For additional information, please see:

<http://www.qu.edu.qa/students/services/transportation>



## CHAPTER 3.

### STUDENT SUPPORT AND SERVICES

#### Community Involvement and Service Learning

Qatar University fosters collaboration between itself and the community by engaging student and academic resources toward the enrichment of life in our local, national, and global societies. Our goals include developing new courses and projects in which community-based partnerships are central to learning outcomes; enhancing existing courses and projects by integrating community engagement into the experience; and creating new initiatives that bring multiple schools and disciplines together to work on shared community-based projects that promote positive social engagement. These courses and projects allow students to put theory into practice and understand the complexities of practical problem solving in real-world situations, thereby preparing them to be effective civic leaders and engaged members of the community.

#### Graduate Learning Support (GLS)

Graduate Learning Support (GLS) in the Office of Graduate Studies serves all QU graduate students from orientation to graduation. GLS is dedicated to (1) developing the academic writing and research skills of graduate students through workshops/webinars, one-to-one consultations, and the QU Grad Student Blackboard Community. In addition, GLS aims to facilitate a sense of graduate community and a positive graduate experience through a variety of national and international writing and research events. For information and support, visit us at <http://www.qu.edu.qa/research/graduate-studies/Graduate-Learning-Support>

#### Student Activities

The Student Activities Department aims to promote and enhance QU's mission by creating an environment for students to test new ideas, develop leadership skills, engage in the learning process, and build their community. Through co-curricular opportunities and experiences such as student clubs and organizations, events, sports, recreation, cross-cultural education, civic engagement and leadership development, students gain invaluable skills and experiential knowledge that they will continue to develop during their time on campus and beyond as future leaders and stewards of Qatar. Engage with us at: <http://www.qu.edu.qa/students/activities>

#### Student Life

##### Campus Events

All students are encouraged to develop their unique personal as well as academic potential by participating in a wide variety of university-sponsored student activities, programs, and events that combine culture, learning, entertainment and fun. Such events include the National Day Celebration, Cultural Village and Club Days, in addition to a wide variety of other co-curricular opportunities that are publicized on campus throughout the year. Get involved and bring your learning to life with campus activities and events.

##### Sport Activities Department

QU offers students, alumni, faculty and staff a wide range of opportunities for competitive and recreational sports. Throughout the year, students are given the opportunity to compete against other QU teams, teams of other universities, or the community.

These programs are designed to promote a team-oriented atmosphere and leadership opportunities for all participants. The University also provides instructional classes in swimming, first aid and similar classes that interest students. Additionally, certified workshops and training sessions in a variety of fields are frequently available.

Members of the QU community have access to three well-equipped sports facilities, including an aquatic complex and stadium for men, and indoor sports complex for women. The aquatic complex includes a diving pool, an Olympic size pool, and a children's/training pool. A variety of sports can be played in the outdoor courts, including tennis, volleyball and basketball. In addition, a year football field and athletic track also are available for student use. A well-equipped gymnasium has a large capacity for indoor sports and recreation events and opportunities.

Table tennis, billiards, chess and other recreational games are available in the Student Activities Buildings. Daily passes and yearly membership are available to the QU community and the public at nominal fees. For more information or any inquiries, please contact: <http://www.qu.edu.qa/students/activities/sports-activities>

##### Global Education and Student Exchange Programs

The Global Education and Exchange Program Section (GESE) provides and facilitates international educational experiences that reflects the attributes and competencies of a QU graduates while reinforcing student learning, social and intellectual growth, in a world characterized by rapid change, increasingly complex connectivity, and a wide spectrum of cross-cultural differences. QU students enjoy a diverse range of international programs through which they can explore other institutions

and cultures around the globe. The Student Activities Department facilitates and supports incoming and outgoing exchange students as well students participating in QU-sponsored programs.

Numerous and diverse off-campus opportunities are available, including:

-Educational Programs that are created, managed and supervised in collaboration with the academic affairs and colleges for students to pursue a research, study or internship globally as well as faculty-led program. Additionally participating in for-credit study abroad and exchange programs.

-Co-curricular and skill development programs which focuses on the participation of students in different activities internationally to enhance a certain skill related to a specific area of interest and encourages students to take part in global competitions, international conferences and global service learning opportunities

- Students may be selected to represent QU on an official basis regionally or internationally in worldwide championships.

Students who are interested in any off-campus learning opportunity can apply online or contact: [studentexchange@qu.edu.qa](mailto:studentexchange@qu.edu.qa)

##### Career Services

The Career Services Center provides counseling, training and professional development services and helps to prepare students to engage and compete for the best career opportunities. It specializes in providing QU students with student employment during their study at QU. Additionally, the Center assists students with sponsorship, internship and full-time job opportunities and provides numerous career-related resources, programs and activities. For additional information, visit the Career Services Center website at: <http://www.qu.edu.qa/students/support-and-development/career-services>.

##### Counseling Services

The Student Counseling Center provides the QU community with a variety of counseling and psychological services. These services include individual and group counseling that help students overcome challenges that affect their success. Also offered is the Self Development Program, which promotes well-being, self-growth, and reflection, as well as the Marriage Group Program which explores specific marital encounters and skills needed to manage academic and marital challenges. The aim of the Center is to promote personal well-being and self development of the QU students, and to help them adjust to the demands of university life. Students can book their appointments online. For additional information regarding the services provided by the Student Counseling Center, please

visit the Center's website at: <http://www.qu.edu.qa/offices/vpsa/divisions/student-counseling-center>.

##### Student Helpdesk

The Student Helpdesk provides students with a single point of reference for all general inquiries. Communication between the section and students is done through the Reception desk, Student Call Center, live chat and the official accounts of Qatar University on social media (Facebook and Twitter). Furthermore, the Student Helpdesk provides a campus tour service, "Explore QU", to introduce QU's buildings and services.

Students can contact Student Helpdesk through:

Email: [studenthelp@qu.edu.qa](mailto:studenthelp@qu.edu.qa)

Telephone: 4403-4444

Visit the Helpdesk in person

For more information, please see: <http://www.qu.edu.qa/students/services>

##### Student Call Center

The Student Call Center receives calls from prospective, current or graduate students, parents, and any external stakeholders, and provides them with answers on issues related to all services offered by the University, and if necessary, direct them to the related departments. The Student Call Center is available during university working hours (8:00 am to 2:30 pm) at 4403-4444, and serves as a vital link for internal and external university communications. It remains an important part of the services offered by Qatar University; in addition to assisting students, it reduces the pressure on the rest of the departments in the Student Affairs Sector, colleges, and various offices at the university. For more information, please see:

<http://www.qu.edu.qa/students/services/student-call-center>

##### Explore QU Service

The Explore QU Service is a campus tour service offered by the Student Helpdesk Section. This service allows Newly Admitted Students, Current Students and Student's Parents to get familiar with QU campus, and better know its buildings and services through well-organized, informative and entertaining tours.

##### International Students Section

The International Students Section provides support services that are designed to assist international students with any academic, personal, financial and immigration-related questions or issues, and presents students with an opportunity



to become involved in the QU community. Currently, international students at QU represent more than 70 countries.

The International Students Section is responsible for the welfare of the students whose residency permit is sponsored by Qatar University, and helps international students to secure their entry visa, as well as residency permit and exit permit; issues annual airline tickets for eligible scholarship students; issues formal sponsorship letters; and coordinates accommodation with the QU Housing Department.

The International Students Section also oversees admission to the Arabic for Non-Native Speakers Program. For additional information, please visit: [http://www.qu.edu.qa/sites/en\\_US/students/international-students](http://www.qu.edu.qa/sites/en_US/students/international-students).

### New Student Orientation

New Student Orientation for graduate students is organized by office of graduate studies. It is compulsory to attend the orientation day to know about the all policies that related to graduate studies such as withdraw, probation, academic dismissal, appeal and others. Students are encouraged to contact their graduate program regarding New Student Orientation requirements and schedules.

### Special Needs

Qatar University is committed to providing all academically qualified students with educational opportunity. Every effort is exerted to ensure fair and appropriate access to programs, services, facilities, and activities for students with special needs. The Special Needs Center provides services and support technologies that are tailored to the needs of individual students throughout their tenure at the University. Currently, support services are provided to the following special needs categories:

- a. Physical impairment
- b. Visual impairment (blindness or low vision)
- c. Speech and language disorder
- d. Students with learning difficulties (such as: Dyslexia)
- e. Students who suffer from temporary disability such as temporary diseases or injury due to accidents.

For additional information on services offered by the Special Needs Center, please see: <http://www.qu.edu.qa/students/support-and-development/special-needs>





## CHAPTER 4.

### ADMISSION POLICIES

All graduate students should be familiar with admission, academic, and financial policies and procedures of the Graduate Programs at Qatar University (QU) as outlined in this catalogue and Graduate studies unified policy provided at the Office of Graduate Studies webpage on the University website.

#### 1. General Requirements for Admission

Applicants who meet the minimum university admission requirements, as outlined below, and have earned a Bachelor's degree or higher from an accredited institution of higher education or an institution recognized by the Ministry of Higher Education in that country are eligible for admission to a graduate program that meets their specific background. The applicants must satisfy all QU admission requirements for the semester of intended admission and submit all appropriate documents by the admission deadline. General admission takes place during the fall semester and spring semester for certain programs. Applicants are required to submit the following:

- Complete Online Admissions Application
- Final and official university transcript satisfying the degree and cumulative GPA requirements of the intended program
- Satisfy QU's English Proficiency requirement
- Health Certificate issued by a certified authority in Qatar. International students may submit the document upon arrival to Qatar.
- Photocopy of the applicant's Qatar ID. International students may submit the document upon arrival to Qatar.
- Non-Qatari applicants must also provide a copy of their passport
- Two recent, identical passport-size photographs with white background
- International students must submit an application for visa along with all required documents as outlined on the Admission Webpage.
- Students aiming for free graduate... must submit online.

It is important to note, however, that the minimum university GPA requirements do not guarantee admission to QU. Students are ultimately accepted to a graduate program according to the strength of the applicant pool and the available capacity in each graduate program.

#### 1.1. University Transcript Requirements

All graduate applicants must submit an official transcript directly to the Admissions Department. The university transcripts submitted by non-QU graduates must be final, official and authenticated, according to the following standards:

##### 1.1.1. Universities in Qatar

All applicants who attended a private university located in Qatar must ensure that the following transcript requirements are met:

- The transcript must be final
- The transcript must be official
- The transcript must be stamped and signed by an appropriate university official

The university must be recognized by the Qatar Ministry of Education and Higher Education

(No Ministry stamps required from recognized universities).

##### 1.1.2. International Universities

All applicants who have attended a university outside of Qatar must ensure the following transcript requirements:

- The transcript must be final
- The transcript must be official
- An Arabic or English translation stamped by a legal translator of the final transcript must accompany the transcript if it is issued in a language other than Arabic or English
- If the university is accredited by an international accrediting association (accreditation recognition must be listed on the official transcript), no further attestation is required
- If the university is not accredited internationally, the transcript must be certified by the

Ministry of Higher Education or equivalent authority in the country in which the university is located. The transcript must also be certified by either:

- The Qatar Embassy in the relevant country; or
- The Embassy of the relevant country located in Doha.

Students graduated from Universities not appearing under the Qatar Ministry of Education and Higher Education must seek inclusion of their respective universities in the list. Failure to obtain the Ministry's approval will result in denial of admission. Students are urged to consult with the Office of

Graduate Studies prior to submitting an application for admission.

#### 1.2. English Competency Requirement

QU graduate students are expected to be proficient in English. Therefore, applicants are required to demonstrate their English proficiency as part of the admission process by either:

- Possessing an earned degree from an accredited institution of higher education in a program where English was the language of instruction, or
- Submitting a program-approved standardized test score, taken within the last two years. Scores from tests taken more than 2 years before the start of the semester of intended admission are not accepted.

#### 1.3. Standardized Test Scores

PhD students must submit official GRE test scores. The College of Business requires GMAT in replacement of GRE scores.

It is the responsibility of the applicant to ensure the test scores are sent directly from the testing agency. Standardized tests scores can be sent to Qatar University according to the following:

- GRE: scores must be sent to Qatar University, Foundation Program (7569)
- TOEFL: scores must be sent to Qatar University, Foundation Program (DI Code 8943)
- IELTS : scores must be sent to Qatar University
- GMAT: scores must be sent to Qatar University-College of Business and Economics-MBA

For more information on the TOEFL, IELTS, GRE, and/or GMAT exam (including testing centers, dates, and practice exams), use the link provided below: <http://www.qu.edu.qa/foundation/Qatar-University-Testing-Center/AboutUs>

#### 2. Transfer Admission

All applicants who are currently or who have previously attended a graduate program and who have earned at least 3 credit hours may apply for transfer admission to Qatar University. Transfer applicants must satisfy all QU graduate transfer admission requirements for the semester of intended admission and submit all appropriate application materials and supporting documents to the Admissions Department by the admission deadline. If the applicants were subject to disciplinary action or non-academic dismissal at a prior

university or college, they will not be considered for admission.

Transfer applicants may apply for Fall admission, as well as Spring admission for certain programs. They are required to submit the following:

- Complete Online Admission Application
- Final and official university transcript of highest degree earned as well as official transcripts for any additional coursework completed beyond the previously earned degree
- Evidence of QU's English proficiency requirement (for programs offered in English)
- Health Certificate issued by a certified authority in Qatar. International students may submit the document upon arrival to Qatar.
- Photocopy of the applicant's Qatar ID. International students may submit the document
- upon arrival to Qatar.
- Non-Qatari applicants must also provide a copy of their passport
- Two recent, identical passport-size photographs with white background
- Official stamped syllabi for courses intended to be transferred. Maximum allowable transfer is 9 credit hours with a minimum grade of "B" or equivalent.

#### 3. Transfer of Credit

According to QU's transfer credit rules and regulations, graduate coursework that has been earned from an accredited university or an institution recognized by the Ministry of Higher Education in that country may be considered for transfer to QU. Grades earned in courses that have been accepted for transfer will not be calculated as part of the GPA at Qatar University. However, the credits earned will count toward the total number required for graduation. A maximum of 9 credit hours with a minimum grade of 'B' may be considered for transfer credit evaluation. Credit hours earned more than five years from the date of admission to QU will not be transferred.

Transfer applicants must submit an official transcript, as well as a catalog course description or course syllabus for all courses for transfer. As some colleges accept fewer transfer credit hours, students are advised to consult the Associate Dean of research and Graduate Studies in the college to determine the maximum number of credit hours and the specific courses that may be transferred to a particular degree program.



## 4. Non-Degree Students

Qatar University allows non-degree admission to a limited number of individuals who may enroll in graduate credit courses at QU. These students are not considered as pursuing a graduate degree program. Credit earned by non-degree students may not be used towards a graduate degree at Qatar University. Non-degree students may register for a maximum of 12 credit hours or 2 semesters of course work at QU, whichever comes first. These students are held to the same academic standards and Student Code of Conduct as all other degree-seeking students at Qatar University. All QU coursework will remain on the academic record. If a non-degree student is dismissed from Qatar University, the dismissal is permanent and the student is not eligible to return at any point in the future. Non-degree students are eligible to seek regular admission to a graduate program provided they meet program requirements and submit all application materials by the admission deadline.

To be considered for non-degree admission, applicants must submit the following documents to the Admissions Department:

- Complete the Online Admissions Application
- Provide final and official university transcript satisfying the requirements of the program
- Submit evidence of QU's English proficiency requirement (for programs offered in English)
- Health Certificate issued by a certified authority in Qatar. International students may
  - submit the document upon arrival to Qatar.
- Photocopy of the applicant's Qatar ID card. International students may submit the
  - document upon arrival to Qatar.
- Non-Qatari applicants must also provide a copy of their passport
- Two recent, identical passport-size photographs with white background

## 5. Visiting Students

Qatar University distinguishes between visiting students who intend to register for courses at

QU and those who wish to conduct research with a QU faculty member or in a research center.

Visiting Students have the same access privileges as those of regular graduate students within the academic unit. They are held to Qatar University's policies and procedures including all

policies regarding intellectual property and the ethical conduct of research. The relevant academic unit is responsible for ensuring that Visiting Students understand and agree to relevant policies. A visiting student is eligible for admission to a graduate program at Qatar University if he/she meets all program admission requirements and university deadlines.

### 5.1. Visiting Students Interested in Enrolling in Courses

In order to be eligible for admission, visiting students interested in enrolling in courses should satisfy either of the following:

- Be currently matriculated in a graduate program offered at another university with a minimum cumulative GPA of 3.0
- Be admitted to a graduate program at another university

Students in the above category are required to submit proof of their acceptance to or enrollment at an accredited institution of higher education to the Admissions Office, at least, two weeks prior to the start of the semester. Visiting Students admitted to QU may register for up to nine credit hours of coursework.

### 5.2. Visiting Students Intending to Conduct

#### Research

Visiting students intending to conduct research with a QU faculty member or in a research center are not formally evaluated for admission requirements and, consequently, are not permitted to take courses for credit at QU. Visiting students are eligible to attend for the purpose of conducting research for up to two consecutive semesters, excluding summer; however, the Vice President and Chief Academic Office (VPCAO) may grant an extension under exceptional circumstances. Unless otherwise stated, the Visiting Student is responsible for all expenses associated with the stay at QU including all travel costs, health insurance, accommodations, etc.

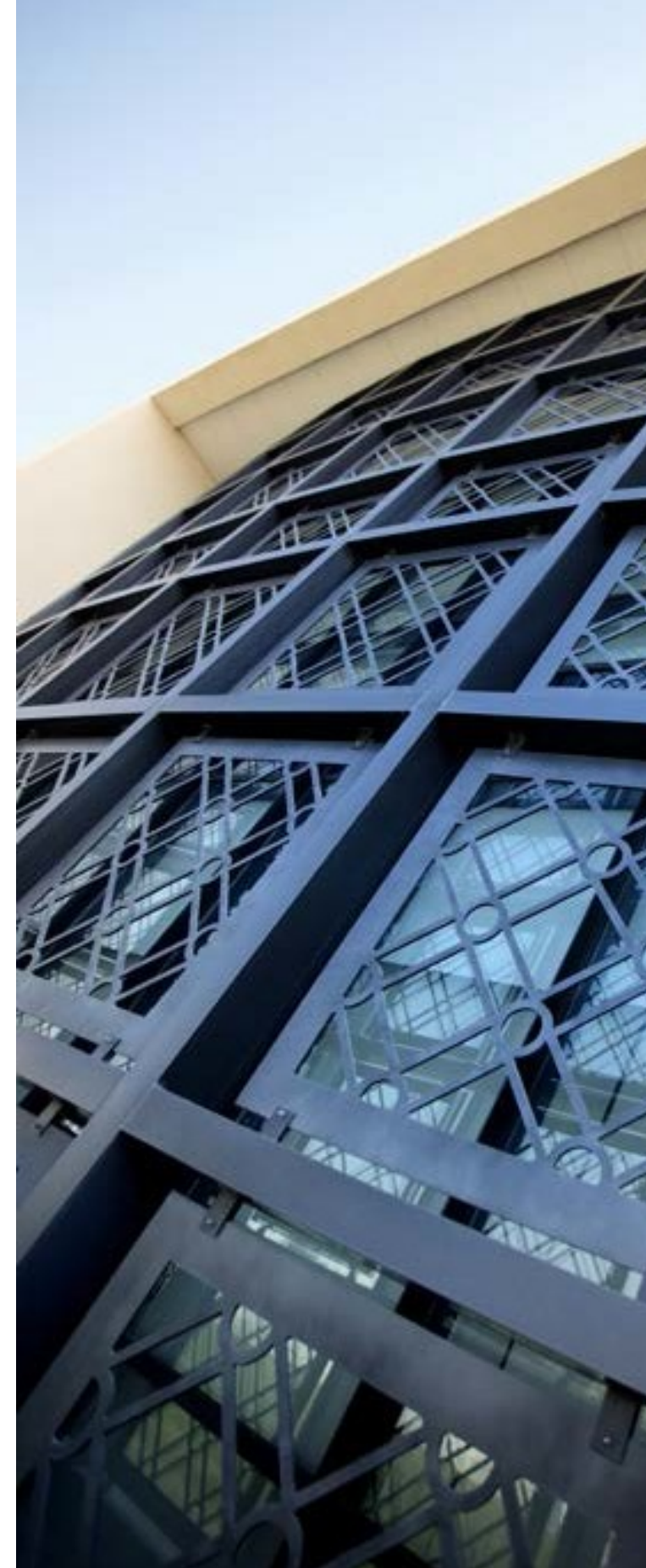
For consideration as a Visiting Student under this category, an applicant must satisfy the following:

- Be enrolled full-time in a master's or doctoral program at an accredited institution with
  - which Qatar University is not a partner
- Be in Good Academic Standing

- Demonstrate an intent to enroll upon return to the home institution
- Not pursuing a dual or joint degree at a university in which Qatar University is a partner.

Upon application for admission, the Associate Dean of Research and Graduate Studies in the host College will review and evaluate a candidate's credentials and issue a Letter of Invitation. The Letter of Invitation should stipulate the students' responsibilities as well as those of the host department. The faculty student's advisor and the student must communicate to Qatar University their acceptance to the stipulations in the letter. A copy of the signed invitation letter must be forwarded to the Dean for Graduate Studies.

It is the responsibility of the Visiting Student to provide the necessary paperwork needed to facilitate the issuance of a visa; as a general rule, the required documents should be available to the hosting academic unit as well as the Office of Graduate Studies, at least, three months prior to the expected visit.



## CHAPTER 5.

### TUITION, ASSISTANTSHIPS AND ACADEMIC SCHOLARSHIPS, TEXTBOOK SECTION

#### Tuition Fees

##### Certificate Level students

Tuition fees for students enrolled in any Certificate Program are QR 2,000 per credit hour.

##### Diploma Level Students

Tuition fees for students enrolled in any Diploma Program are QR 1,500 per credit hour.

##### Master Level Students

Tuition fees for students enrolled in any Master's Program are QR 2,000 per credit hour.

##### Doctorate Level Students

Tuition fees for students enrolled in any Doctorate Program are QR 2,000 per credit hour.

Students enrolled in the Arabic for Non-Native Speakers Program

Tuition fees for students enrolled in the Arabic for Non-Native Speakers Program are QR 600 per credit hour.

##### Tuition Fees Refund Policy

Students who drop one or more courses, or withdraw from the semester after the add/ drop period are subject to the following penalties:

Semester	Time of Drop or Withdrawal after End of Add/Drop Period	Penalty
Fall and Spring Semester	Up to 2 weeks	20%
	After 2 weeks and up to 4 weeks	50%
	After 4 weeks and up to 8 weeks	75%
	After 8 weeks	100%
Summer Semester	Up to 1 week	20%
	After 1 week and up to 2 weeks	50%
	After 2 weeks	100%

If a full week falls within an official holiday, it is not counted in the weeks shown in the above table

Penalties shown in the above table apply to both tuition-paying and tuition- exempted students

#### Other University Fees

##### Lockers

University lockers are available at a rate of QR 25 per semester; no refund is available.

##### Campus Card

No fees will be charged on student for issuing first ID card, but there will be a fine in case of replacing damaged or stolen card, except where the replacement is necessitated by name change, worn card, or by decision of the University.

##### University Housing

Students living in the student accommodation facilities provided by the University are charged QR 2000 per month for room and board, as well as transportation to and from the university. This is a non-refundable charge.

##### Textbook Section

The Textbook Section assumes responsibility for selling Textbooks and eBooks to QU students and Faculty. The University provides a subsidy equaling 50% of the total price for books over QR 50, and the payment is non-refundable. The section announces a book-selling table before each semester, which is made available to students and faculty. For more information, please see <http://www.qu.edu.qa/students/services/textbooks>

##### Copying and printing Center and Self Service photocopying

Category	Copy center price	Copy center price	Self-service price	Self-service price
Black and white	A4	A3	A4	A3
Print & Copy one side	0.10	0.30	0.055	0.20
Print & Copy two sides	0.15	0.45	0.08	0.30
Colored:	A4	A3	A4	A3
Print & Copy one side	1.00	1.50	0.50	1.00
Print & Copy two sides	1.50	2.00	0.75	1.50

#### Other services in the copy center

Category	Pages	Price
Scan	1	0.1
Binding	1 to 49	3
Binding	50 to 199	5
Binding	200 to 500	6
Lamination	1 A4	1.5
Lamination	1 A3	3

Prices indicated in Qatari Riyal

#### Academic Scholarships

As of November 2011, the Higher Education Institute of the Supreme Council for Education (HEI SCE) recognizes many Qatar University Masters and Doctoral degree programs.

##### Diploma in Education Scholarships

These scholarships are awarded under specific criteria to students admitted to the Diploma programs offered by the College of Education.

In order to maintain a scholarship award, a student must satisfy the minimum GPA and academic load requirements of the scholarship. Additionally, most scholarship awards are of a fixed duration, which may vary by scholarship type. Scholarship recipients are bound by all applicable Qatar University rules and regulations, and are responsible for all financial penalties incurred.

For additional information regarding academic scholarships, please contact the Scholarship Office by e-mail at [scholarships@qu.edu.qa](mailto:scholarships@qu.edu.qa) or visit their website at: <http://www.qu.edu.qa/students/admission/scholarships/types>

#### Graduate Assistantships

Qatar University offers financial support in the form of Graduate Assistantship (GA) position to graduate students who engage in teaching and/or research activities that contribute to the university's academic mission and to students' education. Graduate Assistants play a vital role in the enhancement of the university's ranking by supporting the research productivity of QU faculty. GAs also provide academic program support under the direct supervision of faculty; GAs may assist faculty with teaching assignments, grading of problem sets, lab assignments, or examinations as well as

support faculty research. GAs are not permitted to provide administrative services as part of their responsibilities. For more information <http://www.qu.edu.qa/research/graduate-studies/prospective-students/graduate-assistants>



## CHAPTER 6.

### ACADEMIC INTEGRITY

#### University Code of Conduct

Universities are unique communities committed to creating and transmitting knowledge. They depend on the freedom of individuals to explore ideas and advance their capabilities. Such freedom, in turn, depends on the good will and responsible behavior of all members of the community, who must treat each other with tolerance and respect. They must allow each other to develop to the full range of their capabilities and take full advantage of the institutions' resources.

The University Code of Conduct aims at providing all students at QU with clear standards of behavior. By registering as a student, all students acknowledge their awareness and knowledge of the University Code of Conduct and its procedures. Moreover, they understand the consequences of the violation of these standards; violations may be of an academic or non-academic nature.

Students attending an off-campus event as representatives of the University (such as conferences, or athletic events or club activities, Athletic events, etc.) are subject to this code.

QU expects its students to adopt and abide by the highest standards of conduct in their interaction with professors, peers, staff members and the wider University community. Moreover, QU expects its students to act maturely and responsibly in their relationships with others. Every student is expected to assume the obligations and responsibilities required from them for being members of the QU community.

As such, a student is expected not to engage in behaviors that compromise their integrity, as well as the integrity of QU. While the University encourages its students to express themselves freely, this freedom is forfeited when it infringes on the rights of others. Specifically, a student is expected to abide by the principles within the academic and non-academic domains as outlined below.

#### Students Rights and Responsibilities

##### Student Rights

QU recognizes the rights of its students to include:

Access to the academic and non-academic opportunities available to them at the University, provided such opportunities fall within the standards and/or requirements adopted by the University.

Freedom of thought and expression, in alliance with applicable policies, rules and laws adopted by the University.

Equal opportunities regardless of race, color, gender, religion, ethnicity, age or disability.

Confidentiality of university records. University records are not disclosed to other parties unless there is a student's explicit written consent, except for authorized persons as stated in section "Confidentiality of Student Records".

A fair university judicial process whenever applicable.

##### Student Responsibilities

QU students should:

- Contribute to maintaining a safe and orderly university educational environment.
- Show respect to other individuals at QU; Faculty, students, staff and visitors.
- Be familiar with and abide by all students' bylaws, policies and procedures.
- Work to the best of their ability in all academic pursuits.
- Behave responsibly.
- Pursue knowledge.
- Dress appropriately and according to the University rules and regulations.
- Accept responsibility for their actions.

#### Confidentiality of Student Records

All students' records and associated financial records are considered confidential. Student university records are established and maintained for administrative purposes. Access to these records is limited to the student and designated university officials as stated below. Access to these records by other individuals requires the student's explicit written consent, with the exception of the student's parents or his/her legal guardian.

University officials who have legitimate educational interest can have copies of students' records if the needed information is integral element of the work. A "university official" includes faculty, staff, a member of the board of Regents, third-parties acting on behalf of the university, and individuals, including students, serving on university committees. The decision, as to whether a legitimate educational interest exists or not, will be made by the custodian of the records on a case-by-case basis. Should contractual agreements between the student and external agencies sponsoring him/her require the release of these records to such agencies, the student must sign a release form/ or write a release letter to that effect once he/she is admitted to the University.

A student working at QU is considered an employee of the University and, as such, is sometimes required to handle confidential materials. Therefore, he/she is not permitted to divulge (disclose) any confidential information, and is required to sign a statement of confidentiality prior to working at the University.

#### Jurisdiction

All charges involving any violation of the University Code of Conduct will be transferred to the Vice President for Student Affairs (VPSA) for documentation purposes and for determination of the appropriate action to be taken in consultation with concerned parties when the need arises.

#### Definitions of Academic Violations

Academic violations are divided into three categories and include the following:

##### Category One includes:

###### Inappropriate Collaboration

Inappropriate Collaboration includes but not limited to working with someone else in developing, organizing or revising a submitted work without acknowledging that person's help. This work may include: projects, papers, oral presentations, research, design projects or take-home examinations, use of tutors for writing, editing or producing a submitted work, and the use of unauthorized assistance in all cases of submitted work.

###### Disruption of Discipline:

Disruption of discipline includes any disruptive behavior during classes as well as any behavior that affects the educational sessions at QU negatively.

##### Category Two includes:

###### Dishonesty

It includes cheating or any attempt of cheating or disruption during testing sessions. Dishonesty in examinations and any submitted work may include the following forms:

- Submission of non-original papers; test results, work and materials;
- any form of communication between or among students during examination;
- cheating from another student during examination;
- copying from another's paper, giving unauthorized assistance,

- obtaining unauthorized advance knowledge of examination questions, through the use of mobiles or other electronic devices
- obtaining false scores on machine-graded examinations;
- Submitting any material prepared by or purchased from another person or company including reports and research papers.

###### Work Completed for One Course and Submitted to Another

In general, any work for one course should not be presented for another course. Similarly, the students are reminded that when incorporating their own past research in current projects, they must refer to such previous work. Academic assignments include research; statistical data; research interviews; homework and assignments.

##### Category Three includes:

###### Impersonation

Impersonation is the state in which a student or any other person fraudulently attends an exam or any academic activity or obligation in place of another student.

###### Deliberate Falsification of Data

This involves the deliberate act of falsifying any kind of data or manipulating/distorting any supporting documentation for coursework or other academic activities.

###### Complicity in academic dishonesty

Complicity in academic dishonesty means helping or attempting to help another student to commit an act of academic dishonesty. This includes but not limited to doing work for another student; designing or producing a project for another student; willfully providing answers during an exam or quiz; contacting a student on a mobile device while taking an exam and providing information; providing a student with an advance copy of a test; leaving inappropriate materials behind at the site of an exam or test; and altering outcome results.

###### Intellectual Property (IP) Violations / Plagiarism

Respect for original intellectual creativity is vital to academic discourse. This principle applies to works of all authors and publishers in all forms. This encompasses respect for the right to acknowledgement; the right to privacy and the right to determine the form, manner and terms of publication and distribution.

As a general rule, copying, distributing, making derivative work, displaying, or performing copyright-protected work requires the permission of the copyright owner. For purposes such as discussion, analysis, comment, teaching, scholarship, or research, copyrighted work may be used without permission and will not be considered an infringement of copyright, provided that the source has been acknowledged. Since electronic information is easily

reproduced, respect for the work and personal expression of others is especially critical in electronic media. Violations of authorial integrity, including plagiarism, invasion of privacy, unauthorized access, and trade secret and copyright violations may constitute grounds for disciplinary action against any member of the academic community.

Plagiarism applies to all student assignments or submitted work and it includes the use of the work, ideas, images or words of someone else without his/her permission; use of someone else's wording, name, phrase, sentence, paragraph or essay without referring to the source, and misrepresentation of the sources that were used.

## Adjudication of Offenses

Cases resulting from alleged violations of the student integrity code are within the jurisdiction of a faculty member, department head, dean of the college, and the Vice President for Student Affairs. The concerned personnel will consult with the Student Judiciary Committee (SJC), which a university-wide committee, to investigate cases of violations. The mandate of the Student Judiciary Committee is to advise the Vice President for Student Affairs on individual cases with respect to academic or non-academic violation of the integrity code. The Committee, in conducting its business, will observe:

- The concepts of procedural fairness, and
- The existing University Code of Conduct.

This will be accomplished by considering the facts of each case; and examining the preceding deliberations to ensure that the procedures were consistent with QU policy.

In cases of academic offenses, if they are not resolved by the faculty member or within the department, the dean of the college in which the alleged academic offense took place should consult with the college's Student Affairs committee to investigate these cases. However, academic offenses which may lead to a student's dismissal from the University should be forwarded to the Vice President for Student Affairs, who shall communicate the decision to the Vice President Chief Academic Officer, the QU legal Advisor and the President of the University to take the decision. The ultimate decision to dismiss a student from the university lies within the jurisdiction of the president of the university who might seek the advice of the Director of legal affairs office.

## Disciplinary Actions

A student is advised that violations of the University Code of Conduct will be treated seriously, with special attention given to repeated offences. A notation of the University Code of Conduct violation will be entered on the student's permanent record. Penalties for violations of QU rules and regulations or

for acts of student misconduct may include one or more of the following:

### Category One:

- Students will be asked to resubmit the work assigned by the faculty member, or to submit additional work for the course in which the offense occurred.
- A lowered grade or loss of credit for the work found to be in violation of the integrity code.

### Category Two:

- Written warning from the Dean's office of the college where the student is enrolled.
- Exclusion from academic privileges, including Dean's honor's List and VP list of honors all through enrollment at QU.
- A failing grade of (F) or (WF) or denial of credit for the course in which the offense occurred.
- Suspension for one term from the university followed by exclusion from academic privileges (Dean's list and VP list of honors)
- Reprimand from the dean of the college, a reprimand is a written statement of disapproval of behavior issued by the dean of the college and filed in the student's university records.

### Category Three:

- Written warning: It is an official written notification issued by the office of the VP of student affairs specifying that the student's behavior violates the University Code of Conduct, that the action or behavior must cease, and that further misconduct could result in additional disciplinary action.
- Suspension for two consecutive terms.
- Expulsion from the University.
- Temporary suspension of granting the Academic degree.
- Cancellation of the Academic degree granting decision in case of fraud in the documents or procedures that led to granting the degree.

## Procedures and Guidelines

The immediate responsibility for dealing with instances of academic dishonesty, plagiarism, disruption in classroom and other academic violations rests with the faculty member. In any case of academic offense committed by a student, the faculty member should fill out the relevant form of student

offense (Offense Record Form) which shall be documented in the student's personal file in the college's archives and within the office of the VP of Student Affairs (VPSA). This action will allow the University to monitor and record multiple cases of student offenses at the university level.

In the case that a faculty member is convinced that the alleged offense has resulted from a lack of judgment on the student's part rather than an intended dishonesty, the faculty member shall require the student to submit an acceptable academic work that must be put on record in the student file. In such cases, the faculty member may, for example, require the student to rewrite or correct the original work or assignment or to resubmit a substitute work or assignment.

In the case that a faculty member is convinced that the alleged offense is intentional, the following options are possible:

- Asks the student to apologize and continues the work with honesty and confirmation to rules.
- Deduct the student's grade during the assignment or test
- Asks the student to hand in the paper to be graded.
- Asks the student to hand in the paper to be marked with a grade of Zero.

The faculty member who is reporting an allegation of dishonesty must report such action within 3 working days from the date of occurrence or discovery of the alleged offense. The form "Offense Record Form" should be forwarded to the VPSA and the Department Head in which the alleged offense took place.

Based on the level of severity of the alleged offense, and after consultation with the faculty member concerned, the Department Head documents / notes his/her opinion (on the form) after meeting with both the faculty member and the student.

The form is then forwarded to the dean of the college for either the final decision, or to be forwarded to the Vice President for Student Affairs. At the college level, the dean's decision must be based on the recommendations given by the College Student Affairs Committee, whose members are selected at the beginning of the academic year.

In all cases, offenses must be recorded and sent to the Vice President for Student Affairs for monitoring purposes.

In all cases, the student must attend any meetings requested by the college in which the offense has taken place, or by the University, for hearing purposes. Failure to do so may result in making decisions based on available facts.

In cases where the faculty member is not satisfied with the decision of the College Committee, he/she may appeal the decision to the Vice President for Student Affairs.

A student does not have the right to drop or withdraw from the course in which he is subject to investigation for violation.

In case the course was dropped, the University has the right to re-register the student in the course and implement the suggested measure by the committee that is looking into the case or the judicial committee.

## Definitions of Non-Academic Violations

Non-academic violations of QU's code of conduct are divided into three categories:

### Category One includes:

- Illegal trespassing or entering on any University property, including any building, structure or facility.
- Any inappropriate behavior that negatively affects the educational environment within QU Campus including traffic violations and non-compliance to guards directions or obstructions of traffic.
- Damaging, destroying or defacing university property or that of any person while on university premises.
- Unauthorized possession, duplication or use of keys of university buildings, facilities, or property.
- Unauthorized entry into or use of university facilities or property, including computer hardwares and softwares.
- Unauthorized posting of signs, notices, flyers, banners, and announcements.

### Category Two includes:

- Aggressive, disruptive, destructive, or abusive behavior towards faculty members inside the classrooms or even outside the campus or through channels of social media.
- Harassment (verbal or physical) and/or intimidation of peers, faculty, and university visitors and employees in person or through channels of social media or emails.
- Behavior that threatens the physical or emotional safety and well-being of others within campus grounds, premises, and facilities including smoking or possession/usage of illegal substances inside Campus facilities or within the confines of QU campus.
- Violation of Qatar University Dress Code: QU recognizes cultural diversity and respects the requirements needed for a productive learning environment. Students, both males and females, are expected to dress in a manner respectful of the local Qatari culture and traditions as well as the Academic nature of the institution. Inappropriate dress for both males and females is unacceptable.
- Using any social media channel to defame QU or posting pictures of any of the QU staff, faculty members, or students without their consent.



- Violation of the Confidentiality policy by unprofessional exploitation of any Student Employment position in any department or center at QU including disclosure of any information about any member of QU faculty, staff or student. It also includes illegal use of any service.

### Category Three includes:

- Any behavior that would threaten the lives of others physically or morally within the confines of the QU campus or its facilities.
- QU expects its students to behave in a way that respects the norms and social behavior of the Qatari society and the Academic environment of its premises that mandates segregation. Violations of this respect of norms includes as well inappropriate behavior including verbal or physical harassment in addition to invading the privacy of others in all its forms within the confines of the QU campus.
- Theft, which includes stealing of private or university property while on university premises or in connection with any university activity. Moreover, it includes making use of any services without rights to do so.

**Disciplinary actions are related to the seriousness of the violations and their impact on all involved parties and they include:**

### Category One:

- Reprimand.
- Written or oral warning.
- Loss of student employment eligibility.
- Loss of merit scholarship.
- Restitution: reimbursement to the University for any damage or misappropriation of university property after the campus Facilities department values the magnitude of damage.
- University Service: A student may be required to do a number of service hours, engaging in light work tasks, such as the maintenance of college/university property and/or clerical work.

### Category Two:

- Written Warning: in case there is a clear violation of QU dress code and incongruent with the expectations of Qatari society such as sleeveless shirts or short skirts/pants. It applies to an extreme level of Makeup in case of female students.
- Restriction by exclusion from participation in social activities, which includes but is not limited to being

prohibited from: representing QU in any official activity or event, be it cultural or athletic; entering any of university facilities; or serving as an officer of any student organizations.

- Dismissal for one semester or more.
- Strongly advised to attend treatment or counseling, as determined by the director of the Student Counseling Center, in consultation with the VPSA.
- Loss of merit scholarship.
- Expulsion from University.

### Category Three:

- Restriction by exclusion from participation in social activities, which includes but is not limited to being prohibited from: representing QU in any official activity or event, be it cultural or athletic; entering any of university facilities; or serving as an officer of any student organizations.
- Dismissal for one semester or more in case the same violation is repeated.
- Strongly advised to attend treatment or counseling, as determined by the director of the Student Counseling Center, in consultation with the VPSA.
- On or off campus Service duty: A student may be required to do a number of service hours, engaging in light work tasks, such as the maintenance of college/university property and/or clerical work.
- Expulsion from university especially in case of repetition of violations or the enormity of the violation.

As for non-academic offenses, any member of the university community may file a charge of misconduct against any student. The concerned party should fill out a non-academic offense record form within three days of the occurrence of the incident. Charges are to be filed with the Vice President for Student Affairs who will notify the student of the offense with which s/he is being charged, conduct interviews, determine if the Code has been violated and decide an appropriate response. The University keeps the right to inform the parents or custodians of the student at any time during the investigation process.

### Procedures and Guidelines

The following procedures are to be followed in case of non-academic offenses by students:

- Fill the form of non-academic violation
- Send the form to the office of the VP of student affairs.

- The office of Discipline in the VP office will review the complaint, check the student's record and record the complaint.

- The discipline officer will decide if the complaint should be referred to the judicial committee or to be dealt with in the VP office.

- When the case should be referred to the judicial committee, the office of the VP will send it to the committee.

- When the case is to be dealt with within the jurisdiction of the VP office, the discipline officer will recommend the appropriate actions against the student based on the code of conduct.

- The VP of student affairs meets the student in presence of the discipline officer to inform student of the decision.

- The office of the VP of student affairs will keep the case in their records.

- The office of the VP of student affairs will inform all concerned parties about the decision such the registration department, activities department, office of the Dean of the college in which the student is enrolled, scholarship office, etc...

### Records of Disciplinary Actions

Records of the violation and disciplinary action charges and sanctions will be maintained as part of the confidential records in the office of the VPSA and the respective dean of the college for a period of two years after the student graduates or ceases to be a student. Suspension and expulsion charges will become part of the student's official transcript of record.

### Appeal Disciplinary Committee:

The president will form an appeal disciplinary committee consisting of three members to look into the appeals submitted by students to review the procedures of any of the cases decided upon by the judicial committee. The student should appeal against the disciplinary decision recommended by the judicial committee during the first 15 days after being informed of the decision. The committee's term is two years subject to renewal.

## Violation of the Student Integrity Code Forms

### Non-Academic Violations (Arabic version)

### Academic Violations (Arabic version)

### Notification of Outside Parties

When deemed appropriate, the University reserves the right to notify a student's parents or guardians at any time during a disciplinary process.

## Student Complaints System

Qatar University is committed to a policy of fair treatment for the students, faculty, and staff in their relationships with the QU community (student, administration, faculty, staff and other members) through the Student Complaint System and its academic and non-academic procedures.

## Student Complaints Regarding Academic

### Disputes

Academic disputes may include, but are not limited to: admission, grades during the academic semester, academic suspension, charges of dishonesty, plagiarism, deliberate forgery of data, work completed for one course and submitted for another, and violation of intellectual property. The Final Grade change appeal is excluded from this section, please refer to section 4.13.

### Scope

This section sets forth the procedures to be followed by a student who believes he/she has been unfairly or improperly treated by a faculty member in light of the academic process. For example, it applies to disputes over grade assignments during the academic semester, decisions about program or degree requirements or eligibility, or claims that course requirements are unfair.

### Informal Resolution

The student should first try to resolve the grievance informally by discussing the grievance with the faculty member as soon as is reasonably possible after the student becomes, or should become aware of the matter. If the student and faculty member are not able to reach an agreement, the student should discuss the objection with the faculty member's department head. If the complaint remains unresolved, the student should discuss it with the College Dean. In these informal discussions, the department head or dean is encouraged to mediate the dispute. In particular, he/she should talk to both the student and the faculty member, separately or together, and should examine any relevant evidence, including any documentation the parties

wish to submit. If the student objection is against the department head or the dean, the student should discuss it with one administrative level higher than that of the department head/dean.

#### **Formal Resolution**

1. Submit the official online application through myBanner within ten (10) business days of the incident outlining the complaint, the individuals involved, the date and the location of the incident. The student will be informed of the decision by e-mail within ten (10) business days of the complaint's submission. The student will be informed if the investigation exceeds 10 business days.
2. If the student is not satisfied with the outcome, he/she has the right to appeal the decision within ten (10) business days of its announcement. The Vice President for Student Affairs will review and direct the appeal to the appropriate department. The result of the appeal will be e-mailed to the student within ten (10) business days of submitting the appeal.
3. In cases where the student believes that the procedures were not properly followed, he/she has the right to appeal the decision to the Vice President for Student Affairs. The appeal must be filed within ten (10) business days from the date of the decision. The Vice President for Student Affairs shall review all documentation relating to the appeal and make a decision. At this stage, the outcome of the appeal is final and no further appeal is available. In cases where the Vice President for Student Affairs recommends dismissal from the University, the student may submit an appeal to the University President
4. All documents related to the complaint, appeal, and decision shall be kept at the Office of Vice President for Student Affairs.

#### **Withdrawal of Complaint**

Students may withdraw a previously submitted complaint while the complaint is being investigated. In such cases, the complaint will be closed and applicable parties will be informed of the withdrawal. Complaints which have been solved or closed will not be withdrawn.

### **Student Complaints Regarding Non-Academic**

#### **Disputes**

Non-academic issues may include, but are not limited to, harassment (verbal or physical), intimidation, disruptive or abusive behavior within the limitations of QU campus, fines, fees, exclusion from a use of service, discrimination, record access, and violation of policy.

#### **Scope**

This section sets forth the procedures which should be followed by a student who believes that he/she has been unfairly or improperly treated by a member of the University community with regard to a non-academic matter.

#### **Informal Resolution**

The student should first try to resolve the complaint informally as soon as reasonably possible after the student becomes, or should become aware of the matter. If the matter involves a staff member, and the student and the staff member cannot reach an agreement, the student shall discuss it with the staff member's supervisor. . Although students are encouraged to resolve the complaint informally, the nature of certain cases may require that the informal process be bypassed.

#### **Formal Resolution**

1. Submit the official online application through myBanner within ten (10) business days of the incident outlining the complaint, the individuals involved, the date and the location of the incident. The student will be informed of the decision by e-mail within ten (10) business days of the complaint's submission. The student will be informed if the investigation exceeds 10 business days.
2. If the student is not satisfied with the outcome, he/she has the right to appeal the decision within ten (10) business days of its announcement. The Vice President for Student Affairs will review and direct the appeal to the appropriate department. The result of the appeal will be e-mailed to the student within ten (10) business days of submitting the appeal.
3. In case where the student believes that the procedures were not properly followed, he/she has the right to appeal the decision to the Vice President for Student Affairs. The appeal must be filed within ten (10) business days from the date of the decision. The Vice President for Student Affairs shall review all documentation relating to the appeal and make a decision. At this stage, the outcome of the appeal is final and no further appeal is available. In cases where the Vice President for Student Affairs recommends dismissal from the University, the student may submit an appeal to the University President
4. All documents related to the complaint, appeal, and decision shall be kept at the Office of Vice President for Student Affairs.

#### **Withdrawal of Complaint**

Students may withdraw a previously submitted complaint while the complaint is being investigated. In such cases, the complaint will be closed and applicable parties will be informed of the withdrawal. Complaints which have been solved or closed will not be withdrawn.

### **Confidentiality**

Information related to a complaint is treated as confidential and is only shared with authorized individuals on a need-to-know basis. This information is used for the purpose of investigating and resolving the complaint in accordance with QU policy.





## CHAPTER 7.

### ACADEMIC POLICIES AND REGULATIONS

#### Registration

Once admitted to QU, graduate students must register in courses that contribute to the fulfillment of the degree requirements as stipulated by the Study Plan. Registration for classes takes place prior to the beginning of every semester. Students requiring academic advisement should check with their advisors or the Program Director before registering. The following information outlines the steps and requirements necessary to successfully complete the course registration process.

#### Methods of Registration

Graduate students register for courses online through the myQU portal. In order to access their myQU account, new students must use the username and password information provided to them in their admission letter.

Once students have successfully registered for a semester, they can view their course schedule, classroom locations, meeting times, and faculty assignments for all registered courses through their myQU account.

Students experiencing difficulty accessing their myQU account should contact the Student Helpdesk by email at [studenthelp@qu.edu.qa](mailto:studenthelp@qu.edu.qa)

#### Important Registration Information

Graduate students are responsible for their own registration. They are only officially registered in a course when the course appears on the student's schedule in his/her myQU account.

It is sometimes necessary for an academic department or college to make changes to its class schedule, such as changing the class time, location, instructor, merging of sections, or even canceling the course. Departments will make every effort to announce such changes, however, it is the student's responsibility to revise his/her registration according to such changes. The first week of classes in the semester is designated for this purpose. Changes to a student's registration are not permitted beyond the last date for the add/drop period.

A student is allowed to pre-register for a course whose Prerequisite(s) he/she has not yet completed, on the assumption that he/she will pass the Prerequisite course(s) during the semester in which the pre-registration takes place. If the student fails in any pre-requisite course(s), the Registration Department will drop, without notification, all the pre-registered courses that the student is no longer eligible to

take. Consequently, students are responsible for checking their final grades to ensure they have successfully satisfied the Prerequisite(s) and that they have successfully registered in the courses selected for the following semester.

If a student is not allowed to register for a course because of failing or dropping a Prerequisite course, it is the student's responsibility to ensure that his/her course load does not fall below the minimum number of credit hours allowed.

Dates for pre-registration and registration are determined by the University and stated in the academic calendar. This information is also published widely for the University community and updated regularly on the University's web site.

#### Academic Load:

- To be considered full-time, a graduate student must be registered for at least nine (9) credit hours in a normal semester except for students enrolled in research-based programs (in such cases, 6 CH is considered full-time) or those students who are registered in thesis/dissertation hours including the thesis defense .
- Graduate students registered for six (6) credit hours or less (but not less than three (3) credit hours) in normal academic semesters are considered part-time.
- Master students who have completed their coursework and are enrolled in thesis hours are considered full-time even if registered for less than (9) credit hours, or registered for one credit hour for the thesis (a number of zero credit hours), or registered for the oral defense. The total number of hours dedicated for thesis/dissertation research may be divided across semesters.
- Doctoral students are required to be full-time students (registered for at least 9 credit hours). Those students who have completed all courses and are registered for thesis hours are considered full-time. Doctoral students in research-based programs are considered full-time when they are registered for 6 credit hours; dissertation hours may be divided across semesters.
- Doctoral students who have passed the candidacy exam and have completed the required coursework shall be considered full-time even if they are registered for 1CH dissertation or OCH defense.
- Students admitted to the College of Pharmacy's PharmD program may carry a maximum of 18 credit hours per semester.
- A graduate student on academic probation is permitted to carry a maximum semester course load of 6 credit hours.
- The maximum course load for all graduate students during the summer session is 6 credit hours.
- Due to the nature and requirements of their programs, individual colleges may encourage students to register in fewer credit hours than the maximum academic load.

#### Dropping and Adding Courses:

Graduate students may drop or add courses online using myQU during the designated period for add/drop. This period is determined by the university, specified in the academic calendar and updated on the University's website. A course that is dropped before the drop deadline will not appear on the student's transcript.

#### Courses You Cannot Register for by Using MyQU:

Graduate students may not register for the following courses via myQU: Independent Study, Master's Thesis/Project, and Continuous Enrollment and variable credit courses. Students requiring these courses should contact their Program Director for approval. Once registered for these courses, students can access the information regarding the course meeting time, classroom location, and instructor through their myQU account.

#### Prerequisites:

When a student attempts to register for a course, the registration system will check the request against the student's academic record. If the student has not satisfied the Prerequisite, the student will be prevented from registering for the course. Students should contact their Program Director regarding Prerequisite discrepancies.

#### Registration Holds:

Students with registration holds will not be allowed to register for classes until the hold is removed. The student should contact the department that placed the hold for a solution.

#### Withdrawal from a Course:

After the regular add/drop period at the beginning of each term, graduate students may withdraw from one or more courses before a set deadline specified and published by the Office of the Vice President for Student Affairs, provided that the total number of credit hours carried does not fall below the minimum credit hour requirement of the program. This withdrawal period results in differing refund rates. Students are encouraged to consult the University academic calendar for specific dates.

If a student withdraws from a course during the withdrawal period, the grade of "W" is entered on the student's transcript.

#### Leave of Absence:

Graduate students who desire a leave of absence must submit a reasoned and signed request for the leave. The request must include a plan to complete all degree requirements within the time established for the degree category. Students on leave are not qualified for graduate assistantships

Students on study abroad leave as per the Study Abroad Policy require approval by the College Dean, the Dean for Graduate Studies and the VP for Research to maintain the research assistantship. In order to study abroad, only graduate students in good academic standing are eligible for leave of absence. The maximum allowable leave of absence is two terms excluding summer. The VP may grant exception under extenuating circumstances for Students Affairs. Approvals of the major Supervisor/Advisor or the Graduate Coordinator of the program, the college Dean, the Dean for Graduate Studies and the VP for Students Affairs are necessary to process the request. Graduate students intending to resume studies must register for the term they wish to return. The time spent on leave is included in the maximum time limit allowed for completion of the degree. Graduate students on leave are not allowed to take courses at Qatar University.

#### Withdrawal from the Semester:

Withdrawal from a semester (from all courses) requires the approval of the Dean in the respective college and the dean of Graduate Studies. Failure to obtain the necessary approval may result in a grade of "F" for courses and may lead to academic dismissal. Withdrawal from a semester must be within the time limit set by the academic calendar. . If a graduate student withdraws from a semester, he/she must register for the following semester, excluding non-regular semesters. Withdrawal from the semester disqualifies the student from graduate assistantship. Graduate students who extend their leave beyond the approved leave time will be academically dismissed.

#### Withdrawal from the University:

A graduate student may apply for withdrawal from the University. The Dean of the respective college and the Dean for Graduate Studies must approve the withdrawal. Enrollment will be suspended and earned grades will be maintained in the student's record given that the student has completed at least one semester. The maximum period for which a student can leave the University must not exceed two semesters. Failure to obtain the approval may result in academic dismissal. Withdrawal from the University disqualifies student from graduate assistantship.

#### Re-Admission

##### Students Eligible for Readmission:

- Academically dismissed students may not seek readmission to his/her existing program; however they may re-apply for admission to different graduate program offered at the University.
- Dismissed students for non-academic reasons may apply for readmission to the same graduate program or another graduate program at QU .

- Graduate degree seeking students who officially withdrew from the university or who were placed under the Long Absence status and who are seeking to return to the university may apply for readmission .Students leave the university while on academic probation may be readmitted to the same program, however the academic probation will be sustained on the academic record upon their return .
- Students who leave the university without a pre-approval for more than two consecutive regular semesters must submit a request for readmission and must be approved by the Dean of the respective college and the Dean for Graduate Studies prior to submission to the Office of VP for Students Affairs

#### Students Not Eligible for Readmission:

- Graduate applicants who were permanently dismissed from Qatar University are not eligible for readmission .
- Graduate applicants who were previously admitted to Qatar University but whose admission was terminated must re-apply for admission if they wish to attend QU in a future semester.
- Graduate students who are readmitted to their existing program and who are subsequently academically dismissed are not eligible to apply for readmission for the same program.

Readmission is granted at the discretion of Qatar University. Factors which may be considered when determining eligibility for readmission include, but are not limited to, the capacity of the graduate program for the intended semester of admission, registration holds, previous academic achievement, length of absence, activities during the period in which the applicant was not enrolled, any prior disciplinary actions. Applicants seeking readmission must satisfy all graduate admission requirements of the requested degree program for the semester of intended readmission. Upon readmission, Students may be required to complete the degree requirements of their degree program in effect at the time of their semester of readmission. These may or may not be the same degree requirements in effect when the student left Qatar University. Once a student becomes active, he/she is subject to all university rules and policies as applicable to regular degree seeking students. The University may grant the readmission only once for any particular student and current university fees apply upon readmission .It must be noted that before the application for readmission is processed, all holds and outstanding financial obligations to the university must be resolved and removed.

Active students including “No Show” students and students with a Leave of Absence or who formally withdrew from the semester and returning to the university in the semester of their expected return, may register in courses without the need to apply for readmission.

Courses completed more than five (5) academic years prior to the semester of readmission are not automatically counted towards the student’s degree program and in the cumulative records of the student including the cumulative GPA. Such courses must be reviewed for eligibility by the academic program in order to be counted towards the degree and to effect the cumulative records of the student including the student cumulative GPA .. Students who have attended and completed course work at other institutions since their last semester of enrollment at Qatar University may request a transfer of credit for courses completed within five (5) years prior to the student’s semester of return to the university subject to the transfer of credit policy .

Academically dismissed students who are admitted to the university will return with a fresh record where courses and grades earned prior to the student’ admission remain on record and on the QU student transcript but the student’s attempted hours, earned hours, and cumulative grade point average (GPA) will start fresh upon readmission. Courses with passing grades at QU that meet the new program requirements may transfer to the new program subject to the transfer of credit policy .

All previous course work completed at Qatar University remains part of the permanent record of readmitted students.

### Final Examination Schedule

Final examinations are announced at the beginning of each semester and the final exam schedule is posted by the Office of Student Affairs on the university’s website. It is the responsibility of the student to be familiar with these dates. A graduate student who misses a final exam due to circumstances beyond his/her control (family illness or death, personal illness, etc.) must contact the instructor to justify his/her absence and submit proof of the circumstance. This must take place by the time the instructor submits his/her final grades to the Registrar. If the instructor accepts the excuse, the student is given an “Incomplete” grade and a date will be scheduled for a make-up exam to be given. Once the make-up exam has been taken and graded, the instructor will provide the Registrar with the final grade to replace the “Incomplete” grade.

In cases where a different form of assessment is administered in lieu of a final examination, the student is responsible for meeting all requirements and deadlines as determined by the instructor of the course.

## Study Principles and Policies

### Attendance

Class participation and attendance are important elements of every student’s learning experience at QU, and graduate students are expected to attend all classes. Keeping track of the student’s attendance and observation of the student’s performance in class are the responsibilities of the instructor.

The instructor is responsible for establishing the attendance policy for each respective graduate course. The attendance policy must be approved by the Dean of the College and documented in the syllabus. In the course syllabus, the instructors specify the detailed attendance requirements and the students get a copy in the first class meeting of the semester.

The student is responsible for informing the instructor ahead of time, when possible, of absences. The instructor might excuse these absences if they are due for example to a severe medical condition, family emergency or authorized university activities. In case of final exam absence without prior permission from the instructor, a graduate student will receive a zero score for that exam. The student may appeal to the instructor, who, based on documentation and evidence presented by the student, may invoke the regulations applicable to an incomplete grade.

A graduate student should not miss more than 25% of the classes during a semester including excused absences. Those exceeding this limit, will receive a failing grade regardless of their performance. The instructor will determine the validity of an excuse for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent, will be allowed to withdraw from the course.

The following rules are applied in determining attendance of the students:

If a graduate student attends only a part of a class, the instructor determines whether he/she is considered present or absent for that day.

Attendance records begin on the first day of class irrespective of the add/drop period.

If an instructor reschedules a class, the new timing must be suitable and agreed upon in writing by all students; otherwise, instructors cannot hold a student responsible for not meeting the attendance requirement.

If more than 25% of the classes for a course are cancelled during a semester and not rescheduled appropriately, no student in that course will be failed for reasons of absenteeism.

A graduate student who, without prior permission from the instructor, does not take the final exam, will receive a zero score for that exam. The student may appeal to the instructor, who, based on documentation and evidence presented by the student, may invoke the regulations applicable to an incomplete grade.

### Course Assessment and Grading

Graduate student assessment and grading is a continuous process starting on the first day of class and continuing until the end of the semester. Instructors evaluate students’ performance using a variety of mechanisms, methods, and tools. Instructors assess each student’s performance and progress in the class while recognizing his/her areas of strengths and weaknesses.

Grading is a cumulative notion that is based on the student’s performance during the semester. Where possible, the student’s final grade is based upon several different assessment tools. These may include, but are not limited to, exams, projects, presentations, reports, quizzes, reading assignments, research papers, written essays, classroom feedback and discussions etc. In all cases, every student has the right to see, review, and discuss their marks with the instructor.

### Grading Policy

Instructors shall determine the grade for each student registered in their courses according to the following table:

Letter Grades and their Corresponding Grade Points

Letter Grade	Description	Percentage	Grade Points
A	Excellent	90 to 100	4.00
B+	Very Good	85 to < 90	3.50
B	Very Good	80 to < 85	3.00
C+	Good	75 to < 80	2.50
C	Good	70 to < 75	2.00
F	Fail	less than 70	0.00
P+	Pass with Distinction		
P	Pass		
NP	Not Pass		



CC	Continuing Course		
I	Incomplete		
IP	In Progress		
TC	Transfer Credit		
W	Withdrawal		
WF	Withdrawal Failing		
Au	Audit		

### Grade Point Average (GPA)

The Grade Point Average (GPA) is calculated on the basis of all graduate coursework identified in a student's program of study, as well as any additional coursework that is acceptable to the degree program. Coursework taken at Qatar University while in non-degree status will be excluded when calculating a degree-seeking student's GPA. GPA is calculated for each graduate degree independently. For example, a student who completed two separate graduate degrees will have two GPA calculations, one for each degree. However, credit earned in bridging courses do not enter in the GPA calculation of a degree, but are shown independently in the transcript. Coursework taken at Qatar University while in non-degree status will not be used in the calculation of the student's GPA.

Every letter grade has grade points corresponding to it. These constitute the basis for calculating the GPA. The total number of grade points earned for each course is calculated by multiplying the number of credit hours assigned to the course by the number of grade points corresponding to the letter grade received as shown above. The overall GPA is determined by dividing the total number of grade points accumulated for all courses by the number of credit hours attempted. The GPA is an indicator of the student's overall academic performance at QU. It is worth noting that each semester has a GPA, and all earned courses have another GPA known as the cumulative GPA

### Grade Reports and Transcripts

The QU transcript is a student's official record of academic achievement. The transcript contains all the essential information pertaining to his/her course grades, academic

level, scholarship, and degrees received—a summary of the student's academic history. At the end of each semester, every student is issued a grade report through their myQU account summarizing the final grades earned and the academic standing in that semester. Graduate students may obtain their official transcript from the Registration Department.

### Graduation Requirements

Each graduate program offers a study plan consisting of required and elective courses. An academic degree is awarded to students who complete all the requirements of the graduate program in which he/she is enrolled. The graduation requirements for QU graduate programs are as follows:

With a minimum cumulative GPA of 3.00 at the Graduate Certificate, Masters and Doctorate level and 2.50 at the Diploma level. The graduation requirements for QU graduate programs are as follows:

### Graduate Certificate Degree Requirements

- Graduate Certificate: is a non-academic diploma designed for those interested in enhancing their knowledge and skills without being committed to a graduate degree program.
- A Graduate Certificate study plan shall not be less than nine (9) credit hours and the maximum period for completion shall not exceed two (2) years.
- Obtain a minimum cumulative GPA of 3.0 upon completion of the program.

### Pharm D Degree Requirements

- Obtain a minimum cumulative GPA of 3.0 upon completion of the program
- Completion of all program requirements within three (3) years from admission; failure to complete the program requirements within the maximum time allowed shall result in an academic dismissal.

### Diploma Degree Requirements:

- Completion of all program requirements within three (3) years from admission; failure to complete the program requirements within the maximum time allowed shall result in an academic dismissal.
- A minimum cumulative GPA of 2.5 upon completion of the degree requirements.
- Fulfillment of any additional program-specific degree requirements.

### Master Degree Graduation Requirements:

- Obtain a minimum cumulative GPA of 3.0 upon completion of the program.
- Pass the oral defense of the thesis (for those in the thesis track).
  - The oral defense shall take place in the last semester of study upon completion of the credit hours dedicated to thesis research.
  - In the event the student did not pass the oral defense, he/she shall be granted a second attempt.
  - Failure to pass the second attempt at the oral defense examination shall result in the student being excused from the thesis track; however, he/she may be transferred to the project track in the same program (if available) or granted a Higher Diploma degree in the field of specialization. Granting a Higher Diploma degree is contingent upon the recommendation of the college-level Graduate Studies Committee and the university-level Graduate Studies Committee and the approval of the Vice President for Research and Graduate Studies. In such cases, the coursework completed in the masters program shall be considered toward the requirements for the professional degree or higher diploma; additionally, the request shall be exempted from the transfer credit policy and shall be allowed to transfer more than nine (9) credit hours.
- Accomplish one of the following research outputs prior to graduation:
  - Publish or acceptance of publication of a research article, review paper, or a concept paper in a scientific, peer-reviewed journal
  - Publish or acceptance of publication of a book chapter
  - Other research outputs as determined by the college and approved by the Associate Dean for Research and Graduate Studies in the college, College Dean, and the approval of the Dean of Graduate Studies.
- Completion of any additional program-specific requirements
- Compliance with the tad formatting requirements and deadlines set by the Office of Graduate Studies. Noncompliance with tad formatting guidelines by graduation shall result in a registration hold on the final, official transcript and the degree certificate.
- Apply for graduation within four (4) years from admission to the program and in accordance with the application deadlines set in the Office of Graduate Studies; failure to do so shall result in an academic dismissal. The graduation application shall be accompanied by the Similarity Index Approval form with all required signatures of approval.
- Professional Master Degree Graduation Requirements:
  - Obtain a minimum cumulative GPA of 3.0 upon completion of the program.
  - Pass the defense of the graduation project.
  - Accomplish one of the following research outputs prior to graduation:
    - Present a research poster at a conference or other scientific event.
    - Other research outputs as determined by the college and approved by the Associate Dean for Research and Graduate Studies in the college, College Dean, and the approval of the Dean of Graduate Studies.
  - Completion of any additional program-specific requirements.
  - Compliance with the tad formatting requirements and deadlines set by the Office of Graduate Studies. Noncompliance with tad formatting guidelines by graduation shall result in a registration hold on the final, official transcript and the degree certificate.
  - Apply for graduation within four (4) years from admission to the program and in accordance with the application deadlines set in the Office of Graduate Studies; failure to do so shall result in an academic dismissal. The graduation application shall be accompanied by the Similarity Index Approval Form (with all required signatures of approval).
- Executive Master Degree Graduation Requirements:
  - Obtain a minimum cumulative GPA of 3.0 upon completion of the program.
    - For the project track:
      - Pass the defense of the graduation project.
    - For the thesis track:
      - Pass the oral defense of the thesis.
    - The oral defense shall take place in the last semester of study upon completion of the credit hours dedicated to thesis research.
    - In the event the student did not pass the oral defense, he/she shall be granted a second attempt.
    - Failure to pass the second attempt at the oral defense examination shall result in an academic dismissal.
    - Accomplish one of the following research outputs prior to graduation:
      - Publish or acceptance of publication of a research article, review paper, or a concept paper in a scientific, peer-reviewed journal
      - Publish or acceptance of publication of a book chapter

- Other research outputs as determined by the college and approved by the Associate Dean for Research and Graduate Studies in the college, College Dean, and the approval of the Dean of Graduate Studies.
- Completion of any additional program-specific requirements.

Compliance with the tad formatting requirements and deadlines set by the Office of Graduate Studies. Noncompliance with tad formatting guidelines by graduation shall result in a registration hold on the final, official transcript and the degree certificate.

### Dual-Degree Bachelor-Master (Accelerated Program) Requirements

- Accelerated (Bachelor-to-Master) Program: provides a study track in which the student obtains both the Bachelor degree and the Master degree at an accelerated pace. Prior to being admitted to the Accelerated Program, the student must have completed at least 75% of the credit hours required in the undergraduate program with a minimum cumulative GPA of 3.0. The student shall be classified as an undergraduate student until all Bachelor degree requirements have been met after which his/her status shall be changed to graduate.
- Students in the Accelerated Program are subject to the academic standards and policies related to their academic status (i.e. undergraduate or graduate).
- A maximum of 6 credit hours from the Master degree shall be eligible for dual credit in the Bachelor degree.
- Each degree shall be awarded separately
- The Graduation Requirements for the Accelerated Program are:
  - Satisfy all degree requirements for the Bachelor and Master degrees (either project or thesis track) prior to graduation.
  - Obtain a minimum cumulative GPA of 3.0
  - Completion of the Accelerated Program within a maximum of eight (8) years.
- A student who withdraws from the Accelerated Program upon completion of the Bachelor degree requirements but before completion of the Master degree requirements shall receive the Bachelor's degree. The student may complete the requirements for the Master degree within one year of the withdrawal according to the university admission policies and procedures. If, at a later time, students decide to complete the requirements for the Master's degree, they must apply for admission, be admitted (automatically) and then complete the requirements. The time between withdrawal and automatic admission shall not exceed one year.

### PhD Degree Graduation Requirements

- Obtain a minimum cumulative GPA of 3.0 upon completion of the program
- Pass the Comprehensive Examination
  - Upon passing the Comprehensive Examination, the student shall be permitted to register for thesis hours in the following semester
  - Failure to attend testing without acceptable excuse shall result in an automatic failure
- Pass the Candidacy Examination
  - Failure to attend testing without acceptable excuse shall result in an automatic failure
- Pass the Oral Defense
  - The oral defense shall take place in the last semester of study upon completion of the credit hours dedicated to thesis research.
  - In the event the student did not pass the oral defense, he/she shall be granted a second attempt.
  - Failure to pass the second attempt at the oral defense shall result in one of the following (pending the recommendation of the Examination Committee):
    - Academic dismissal from the program;
    - Be transferred to the Master's program in the same discipline (if available) and allowed the opportunity to complete the requirements for the degree; In such cases, the courses completed in the doctoral program shall be evaluated for transfer credit toward the Master's degree, and the student shall be exempted from the maximum transfer credit requirement. The Examination Committee's recommendation shall be approved by the college-level and university-level Graduate Committees as well as the VPRGS;
    - Be awarded a Master's degree in the same discipline. In such cases, the student must have met the requirements for the Master's degree at Qatar University. The Examination Committee's recommendation shall be approved by the college-level and university-level Graduate Committees as well as the VPRGS.
  - Failure to attend testing without acceptable excuse shall result in an automatic failure
- Publish or acceptance of publication of, at least, one research article (for course-based programs) and, at least, two research articles (for research-based programs) in a scientific, peer-reviewed journal
- Publish or acceptance of publication of one of the following additional research outputs prior to graduation:
  - Review paper
  - Book chapter
  - Conference paper at a peer-reviewed conference

- Concept paper
- Other research outputs as determined by the college and approved by the Associate Dean for Research and Graduate Studies in the college, College Dean, and the approval of the Dean of Graduate Studies.
- Completion of any additional program-specific requirements
- Compliance with the tad formatting requirements and deadlines set by the Office of Graduate Studies. Noncompliance with tad formatting guidelines by graduation shall result in a registration hold on the final, official transcript and the degree certificate.
- Submit the Application for Graduation in accordance with the deadlines set by the Office of Graduate Studies accompanied by the Similarity Index Approval form with all required signatures of approval. Failure to apply for graduation within the maximum duration allowed for program completion shall result in an academic dismissal.

### The Comprehensive Examination: is designed to assess a doctoral student's cumulative knowledge and skills in the field of study.

- The Comprehensive Examination is given at the end of the last semester of coursework
- At the beginning of the student's last semester of coursework, the Associate Dean for Research and Graduate Studies, in coordination with the program, shall appoint a committee for the Comprehensive Examination, which shall be filed along with the student's details in the Office of Graduate Studies
- The Comprehensive Examination Committee shall be comprised of, at least, three (3) voting members with expertise in the field and who have graduate faculty supervisory status
- The Committee Chair shall be a non-voting member external to the program
- The Committee Chair shall submit the Comprehensive Examination Evaluation form to the Associate Dean for Research and Graduate Studies within five (5) working days of the exam, who will submit the form to the Office of Graduate Studies within ten (10) days from the date of the exam
- The Comprehensive Examination shall be comprised of written and/or oral components as agreed upon by all parties
- A student shall be allowed a maximum of two attempts to pass the Comprehensive Examination; he/she must pass the comprehensive exam before registering for dissertation hours in the following semester. If the student fails the first attempt at the Comprehensive Exam, he/she must have the second attempt by the end of the following semester
- The committee's decision regarding the result of the comprehensive exam is final.

- Failure to pass the second attempt at the Comprehensive Exam shall result in one of the following (pending the recommendation of the Examination Committee):
  - Academic dismissal from the program;
  - Be transferred to the Master's program in the same discipline (if available) and allowed the opportunity to complete the requirements for the degree; In such cases, the courses completed in the doctoral program shall be evaluated for transfer credit toward the Master's degree, and the student shall be exempted from the maximum transfer credit requirement. The Examination Committee's recommendation shall be approved by the college-level and university-level Graduate Committees as well as the VPRGS;
  - Be awarded a Master's degree in the same discipline. In such cases, the student must have met the requirements for the Master's degree at Qatar University. The Examination Committee's recommendation shall be approved by the college-level and university-level Graduate Committees as well as the VPRGS.
- Failure to attend testing without acceptable excuse shall result in an automatic failure

### Candidacy Examination: the Candidacy Exam is designed to assess the quality, significance, and contribution of the dissertation research as well as the student's scientific background and ability to conduct meaningful research.

- A student may take the Candidacy Exam upon completion of one semester of dissertation research and must pass the exam prior to the end of the second semester of dissertation research
- The Candidacy Examination Committee shall be comprised of a minimum of three (3) voting members including the Supervisory Committee and, at least, one additional member; the additional member shall be an expert in the field and meet the criteria for graduate faculty with supervisory status.
- The Committee Chair shall be a non-voting member external to the program
- The Committee Chair shall submit the Candidacy Examination Evaluation form to the Associate Dean for Research and Graduate Studies within five (5) working days of the exam, who will submit the form to the Office of Graduate Studies within ten (10) working days from the date of the exam
- The student must pass the Candidacy Exam before being allowed to carry out the proposed dissertation research; the exam is comprised of three (3) parts:
  1. Prepare the first three (3) chapters of the dissertation including the Methodology chapter and submit (in whole) to the Examination Committee at least one week prior to the date of the Candidacy Exam
  2. Give an oral presentation of the proposed dissertation research



3. Defend the dissertation proposal to the Candidacy Examination Committee; the proposal defense may include discussions concerning the student's depth of knowledge in the field and his/her research skills
- A student shall be allowed a maximum of two attempts to pass the Candidacy Examination
  - Failure to pass the second attempt at the Candidacy Exam shall result in one of the following (pending the recommendation of the Examination Committee):
    - Academic dismissal from the program;
    - Be transferred to the Master's program in the same discipline (if available) and allowed the opportunity to complete the requirements for the degree; In such cases, the courses completed in the doctoral program shall be evaluated for transfer credit toward the Master's degree, and the student shall be exempted from the maximum transfer credit requirement. The Examination Committee's recommendation shall be approved by the college-level and university-level Graduate Committees as well as the VPRGS;
    - Be awarded a Master's degree in the same discipline. In such cases, the student must have met the requirements for the Master's degree at Qatar University. The Examination Committee's recommendation shall be approved by the college-level and university-level Graduate Committees as well as the VPRGS.
  - The committee's decision regarding the result of the Candidacy Exam is final
  - Failure to attend testing without acceptable excuse shall result in an automatic failure

### Discontinued Degree Programs

A student pursuing a graduate degree in a program discontinued by the University will be permitted to complete the program within a time limit specified at the time of the announcement to discontinue the program

### Incomplete Grades

An incomplete 'I' grade may be received in a course if the student attends but fails to complete all the course requirements. The Incomplete grade is not an alternative for an 'F' due to poor performance. To be considered for an incomplete grade, the student must provide an acceptable justification for failing to complete the required work to the course instructor, which the director of the graduate program must also approve. If the justification is related to medical reasons, it must be supported by a medical report that is certified by the Public Health Authority or Hamad Medical Corporation and submitted to the Registration Department. Any person presenting the medical report on behalf of the student must provide his/her own ID in addition to that of the

student. If the incomplete grade is given because the student did not take the final exam, the student should arrange with his/her instructor to take a make-up exam. The deadline for changing an 'I' grade is the last day of the second week of classes in the following semester. Upon successful completion of the required work, the course instructor will replace the 'I' grade with a letter grade (A through F) and submit it to the Registration Department.

If a grade of 'I' is not changed by the end of the specified period, it will be changed automatically to an 'F'. Only the Vice President for Student Affairs may grant an extension beyond the specified time limit. At the end of the first week of classes in the following semester, the Office of the Registrar will remind instructors who have given incomplete grades to change them before the deadline.

### Grade Appeal and Changing a Grade

A student who believes he/she has received an unfair or erroneous grade may contest the grade to the instructor of the course within ten (10) business days of the issuance of grade reports. If the instructor concurs with what the student claims, he/she submits a grade change to the director of the program/department head. The student will be notified of the grade change once it is made and sent to the Registration Department for posting.

If the instructor does not agree with the student's claim, the student may submit a written, signed, and dated appeal to the Program director or department head or the College Dean, explaining his/her position. The Program Director or the Dean will review the merits of the appeal, and may consult with the relevant faculty in the college before ruling on the appeal. Should the course instructor also be the director of the program/department head, the student should submit his/her written complaint directly to the Dean of the College.

If the student is not satisfied with the decision of both the instructor and the director, he/she may submit a written appeal to the University Graduate Committee, who will then make the final decision on the appeal.

### Academic Probation

While every effort is made by Qatar University to provide timely and accurate information to students about their academic standing, it is the sole responsibility of students to be aware of their academic standing at all times.

Graduate students are placed under Final Probation when their cumulative GPA is below the 3.00 requirement for Good Standing, regardless of the total number of Credit Hours earned. PharmD and Diploma students are placed under Final Probation when they fail to satisfy the 2.50 cumulative GPA requirement for Good Standing, regardless of the total number of credit hours earned. Academic probation is noted on the student transcript and academic records.

Graduate students placed under academic probation are allowed to register in a maximum of 6 CH per regular semester and a maximum of 3 CH in the summer term or short terms. Deviation from the stipulated maximum credits requires approval from the Vice President for Students Affairs. Also, they may request to withdraw from a semester, request a leave of absence, or leave the university subject to the university rules and regulations as defined in the withdrawal policy. They may also apply for transfer to another program subject to university rules and regulations as defined in the transfer policy. Graduate students placed under academic probation who do not register in any course in a given semester will be academically dismissed at the end of that semester unless they received prior approval.

The summer term is not considered for academic probation decisions. However, the GPA earned during a summer session will impact the student's cumulative GPA calculation and academic standing decision at the end of the subsequent semester. An advisory hold preventing students from registering in classes is activated for all students placed under academic probation. Academic probation decisions are officially communicated to all concerned students, their advisor, the head of their department and the Office of Graduate Studies at the end of each semester excluding the summer term.

### Academic Dismissal

A graduate student will be academically dismissed from the University for the following conditions:

- Failing a course two (2) times.
- Failing to pass the comprehensive examination two times.
- Failing to pass the candidacy examination two times.
- Failing to pass the dissertation examination two times.
- Failing to achieve the minimum cumulative GPA requirements for "Good Standing" by the end of the following semester after having been placed on probation (summer not included).

- Failing to achieve the minimum GPA requirement for "Good Standing" in the bridging courses (partial or all of bridging courses) by the end of the semester.
- Failing to achieve the minimum cumulative GPA requirement for "Good Standing" in three non-consecutive semesters.
- Failing to meet graduation requirements within twice the period required for program completion as defined in the program approved study plan upon matriculation in the University.

Graduate students placed under academic probation who do not register in any courses in a given semester, will be academically dismissed at the end of that semester unless they received prior approval.

Academic Dismissal is noted on student transcript and academic records.

### Readmission

- Graduate applicants who were permanently dismissed from Qatar University are not eligible for readmission.
- Graduate applicants who were previously admitted to Qatar University but whose admission was terminated must re-apply for admission if they wish to attend QU in a future semester.
- Academically dismissed students are not allowed to apply for readmission however; they may apply for admission only in another graduate program at QU.
- Dismissed students for non-academic reasons may apply for readmission to the same graduate program or another graduate program at QU.
- Students who leave the university without a pre-approval for more than two consecutive regular semesters must submit a request for readmission and must be approved by the Dean of the respective college and the Dean for Graduate Studies prior to submission to the Office of VP for Students Affairs.
- All holds and outstanding financial obligations to the university must be resolved and removed before the application for readmission is processed.
- Readmission is granted at the discretion of Qatar University. Factors which may be considered when determining eligibility for readmission include, but are not limited to, the capacity of the graduate program for the intended semester of admission, registration holds, previous academic achievement, length of absence, activities during the period in which the applicant was not enrolled, any prior disciplinary actions.

- Once a student becomes active, he/she is subject to all university rules and policies as applicable to regular degree seeking students.
- Upon readmission, students may be required to complete the degree requirements of their degree program in effect at the time of their semester of readmission. These may or may not be the same degree requirements in effect when the student left Qatar University.
- Courses completed more than five (5) academic years prior to the semester of readmission are not automatically counted towards the student's degree program and in the cumulative records of the student including the cumulative GPA. Such courses must be reviewed for eligibility by the academic program in order to be counted towards the degree and to effect the cumulative records of the student including the student cumulative GPA.
- Students who have attended and completed course work at other institutions since their last semester of enrollment at Qatar University may request a transfer of credit for courses completed within five (5) years prior to the student's semester of return to the university subject to the transfer of credit policy.
- Applicants seeking readmission must satisfy all graduate admission requirements of the requested degree program for the semester of intended readmission.
- Graduate degree seeking students who officially withdrew from the university and who are seeking to return to the university may apply for readmission.
- Students placed under the Long Absence status who are seeking to return to the university must apply for readmission.
- Active students including No Show students and students with a Leave of Absence or who formally withdrew from the semester and returning to the university in the semester of their expected return, may register in courses without the need to apply for readmission.
- Academically dismissed students who are admitted to the university will return with a fresh record where courses and grades earned prior to the student's admission remain on record and on the QU student transcript but the student's attempted hours, earned hours, and cumulative grade point average (GPA) will start fresh upon readmission. Courses with passing grades at QU that meet the new program requirements may transfer to the new program subject to the transfer of credit policy.
- All previous course work completed at Qatar University remains part of the permanent record of readmitted

students.

- Students leave the university while on academic probation may be readmitted to the same program, however the academic probation will be sustained on the academic record upon their return.
- Graduate students who are readmitted to their existing program and who are subsequently academically dismissed are not eligible to apply for readmission for the same program.
- Current university fees apply upon readmission.
- The University may grant the readmission only once for any particular student.

### Repeating a Course

The following applies to all Graduate students repeating a course:

Graduate students who have completed a course with a grade of C or C+ grade, as defined in the graduate grades policy, are permitted to repeat a course. Students are allowed to repeat a course only once. Graduate students are allowed to repeat a failed course only once. Failing a course for the second time will result in an academic dismissal. Students who failed a course must obtain the approval of their academic advisor and the head of department before repeating the course

In the event that a student repeats a course, the highest grade obtained will be used in the calculation of the cumulative GPA.

- The course repeat policy does not apply, with the exception indicated below, to courses that use the same course id (same subject and number) but where different topics are offered in different terms. Such courses include special topics courses.
- For courses that use the same course id (same subject and number) but where different topics are offered in different terms such as "Special Study or Special Topics", the course repeat policy is to be applied only when the repeated course taken by the student cover the same topics as the previously attempted course.
- Students seeking to repeat a deactivated course for which there exists an equivalent course that does not have the same title or catalog number as the original course, must receive approval for the course grade replacement from the College Dean or designee before registering in the course.
- Following the awarding of a degree, no changes in the grade point average will be made, even if students repeat a course.

### Auditing Courses

Graduate students are allowed to audit courses on a non-credit basis subject to the approval of the Dean of the college offering the course. Audited courses do not carry credit and are not

used to satisfy degree requirements, however they are noted on the student's academic record by 'AU' grade. A student may audit a course only once. Students are charged the standard tuition fees and registration cost. Procedure: To change the status of the course to for-credit a student must submit an application to the Registration department no later than two weeks from the commencement of classes.

### Internships

The University values internships and clinical experiences. Internships combine what the student has learned in the classroom with a real world environment such as a company/business, laboratory, or governmental project. The graduate program director, in conjunction with the internship instructor, determines the number of credit hours to be awarded to an internship. Upon completing the requirements of an internship, the student receives a grade from the instructor. To apply for an internship, graduate students must have the support of their academic advisor and the head of the program in which he/she is enrolled.

### Study Abroad Students

Qatar University (QU) is keen to include international expertise and cooperation in the field of research among graduate students and seeks to encourage QU graduate students to conduct research in collaboration with an external faculty member, while being unwilling to obtain a university degree from the participating institutions, unless otherwise stipulated in agreements with the partner institutions.

- A graduate student seeking to study or conduct research abroad during a normal academic year, should meet the following requirements:
  - Be registered in a QU graduate program at the master or doctoral level;
  - Be in Good Academic Standing (minimum GPA of 3.0); and
  - Not seeking to obtain a dual or joint degree from QU and any other institution, unless otherwise stipulated in agreements with the partner institution.
- A graduate student can be registered at an external institution for a maximum of two consecutive or separate semesters, excluding the summer semester, unless otherwise stipulated in agreements with the partner institution.
- Unless otherwise stipulated in agreements with the partner institution, any coursework or program study, which is prescribed outside QU, will be subject to the transfer credit policy. For such courses, a grade of TC will be designated in the academic record.

- Any credit hours completed for thesis or dissertation research while at an external university/institution shall be included in the academic record of the student and calculated toward fulfilment of the program study plan. In such cases, the student will be given a "P" grade based on the approval of the dissertation supervisor, program coordinator/department head, Associate Dean for Research and Graduate Studies at the college, College Dean, and Dean of Graduate Studies. Additionally, the student should submit evidence of being registered for thesis/dissertation hours at the external university/institution.
- A graduate student seeking to study abroad should submit proof of acceptance from the hosting university/institution (i.e. official invitation letter) prior to the study abroad request for leave of absence. The invitation letter should also detail the duration; the leave period will be calculated as part of the maximum period allowed for degree completion.
- The approval for a Study Abroad request is issued by the Dean of Graduate Studies. To obtain approval, a graduate student should submit the invitation letter from the external institution (detailing the study abroad period and how the coursework/research to be conducted is aligned with the program study plan) to the thesis supervisor for initial approval. Beyond the supervisor's approval, the request must subsequently approved by the program coordinator/department head, Associate Dean for Research and Graduate Studies, college Dean, and, finally, the Dean of Graduate Studies; the approval letter shall include the obligations of both the student and QU.
- A copy of the signed letter shall be sent to the Vice President for Research and Graduate Studies and the Vice President for Student Affairs.
- Any curricula, which are prescribed outside QU, should be approved by the program coordinator/department head, Associate Dean for Research and Graduate Studies, college Dean and Dean of Graduate Studies;
- Approval for a QU graduate student to take coursework or conduct research at an external institution is based on the following criteria:
  - The international ranking of the institution
  - The curriculum vitae of the external supervisor
  - The student's field of specialty and purpose of travel
  - The requirements and terms of the external universities, if any

### Transferring Credits

Transferring courses to QU is subject to different cases discussed below.

1. Courses taken at other university before enrollment at QU
  - A maximum of 9 credit hours of graduate courses or



bridging courses, which are taken at an accredited, recognized college or university may be transferred; however, courses graded on nonstandard basis (for example Pass/No Pass, Satisfactory/Unsatisfactory) or earned earlier than five years from the completion of the course are not accepted for transfer.

- Only courses with a grade of 'B' or higher on the official issued transcript will be considered for transfer.
- The courses will be given a grade of 'TC' and will not bear on the GPA calculation at QU.
- The student must submit an application with official transcripts and course syllabi from the college or university where he attended.
- The graduate program determines the equivalency for potential transfer credit. Upon the final evaluation by the program coordinator, the program will communicate to the Registration Department the courses accepted for transfer credit.

#### 2. Courses taken at other university while enrolling at QU

- Unless otherwise stipulated in agreements with the partner institution, a maximum of 9 credit hours of graduate courses taken at another University while enrolling in a graduate program at Qatar University may be transferred.
- Only courses with a grade of 'B' or higher on an official transcript issued by a recognized and accredited institution will be considered for transfer.
- Unless otherwise stipulated in agreements with the partner institution, any coursework or program study, which is prescribed outside QU, will be subject to the transfer credit policy. For such courses, a grade of TC will be designated in the academic record.
- Any credit hours completed for thesis or dissertation research while at an external university/institution shall be included in the academic record of the student and calculated toward fulfilment of the program study plan. In such cases, the student will be given a "P" grade based on the approval of the dissertation supervisor, program coordinator/department head, Associate Dean for Research and Graduate Studies at the college, College Dean, and Dean of Graduate Studies. Additionally, the student should submit evidence of being registered for thesis/dissertation hours at the external university/institution.

#### 3. Credit transfer to other programs

Graduate courses taken at QU may be considered for transfer to another graduate program at QU with the following condition:

- Before courses may be transferred, the student must have been approved to transfer to a different program.
- The maximum number of credits accepted for transfer is subject to program approval.
- The program may not accept to transfer any credit.
- Only courses approved by the new program and are with a grade of 'B' or higher for the master or doctorate programs and 'C+' or higher for the diploma programs will be considered for transfer.
- Credit hours earned more than five years from the date of last attendance at QU cannot be transferred.
- Grades and credit hours earned in QU courses accepted for transfer will count toward the GPA calculation and to satisfy the degree requirement. Several programs require a written and/or oral general examination.
- The examination may be an initial diagnostic or a final comprehensive examination over the student's fields of study. Students must pass all examinations required by the program in order to complete all degree requirements.
- They are advised to consult with the director or of the program/department head for specific program requirements.

#### 4. Credit transfer for fulfilling two graduate degrees

Graduate credit transferred for the fulfillment of two graduate degrees is permitted at Qatar University under the following conditions:

- A student who has completed a master's degree at QU and received admission to a PhD program at QU is allowed to be exempted a maximum of nine graduate credit hours towards a PhD program pending the approval of the PhD Program Coordinator, the College Dean and the Dean of Graduate Studies.
- A student who has completed a master's degree at QU and received admission to another master's degree at QU is allowed to transfer a maximum of nine graduate credit hours towards the other master's program pending the approval of the Program Coordinator, the College Dean and the Dean of

Graduate Studies.

- A student who has completed a Graduate Certificate Program at QU and has received admission to a graduate program is allowed to transfer part or all of the credits taken to fulfill the Graduate Certificate Program pending the approval of the graduate Program Co coordinator, the College Dean and the Dean of Graduate Studies. This transfer is not counted against the "9 CH" transfer credit limit. The maximum length of absence between completion of a master's degree and admission to PhD should not exceed one academic year in order to take advantage of the 9-hour exemption. However, courses graded on a nonstandard basis (for example Pass/No Pass, Satisfactory/Unsatisfactory) are not accepted for transfer.

#### Change of Graduate Program

Graduate students may change their graduate program to a different graduate program in the same college upon the approval of the Program Director. The Request for Change in the Graduate Program Form is available on the Office of Graduate Studies webpage at:

<http://www.qu.edu.qa/offices/vpcao/graduates/documents/Request-For-Change-In-Graduate-Program - Copy.pdf>

#### Transfer Students

QU welcomes students transferring from other accredited institutions of higher education. Additional information regarding transfer admission requirements can be found in the admissions section of this catalog.

#### Visiting Graduate Students

Qatar University (QU) encourages academic and research cooperation with local, regional, and international institutions. Therefore, we welcome visiting graduate students seeking to pursue certain coursework, conduct research within in particular department, work with a QU professor, or conduct other academic/research assignments. Although visiting students are not degree-seeking students at QU, we consider such students as a value addition to the University's educational and academic ecosystem.

- Visiting graduate students shall adhere to Qatar University's policies and procedures and to the intellectual property rights and ethical research practices used at Qatar University. The academic entity at Qatar University shall ensure student compliance with the all policies, laboratory permits, and other applicable conditions in this respect.

- Visiting graduate students shall enjoy the same privileges of full-time graduate students enrolled in the academic unit.
- Visiting graduate students shall submit all documents required for processing their entry visa to the State of Qatar at least three months ahead of arrival. The required documents shall be sent to the Academic Unit (i.e. program, department, college), as well as to the Dean of Graduate Studies.
- A visiting graduate student shall submit official evidence of their enrolment as fulltime graduate students in their home institution; the document shall also state that the student will resume their study upon return to their respective university/institution.
- The Associate Dean for Research and Graduate Studies at the host college, or the Director of the host Research Center, or their delegate, shall follow up processing of the authorization documents and invitation letter for the visiting student. The invitation letter shall specify the student's obligations, name of the department/Research Center, and the duration of the visit. The student shall agree to abide by the terms and conditions set forth by Qatar University.
- For visiting students who are invited to assume specific academic or research assignments, the invitation letter shall specify the following:
  - The job assignments which are directly related to the academic or research objective; visiting students are not permitted to provide any administrative services as part of their responsibilities. Additionally, they shall not engage in any externally-funded research project except after obtaining the prior consent from QU Vice President for Research and Graduate Studies.
  - Detail the financial remunerations for the job assignments based on a lump sum monthly pay to be fixed by the Human Resources Department.
  - The Associate Dean for Research and Graduate Studies at the host college, or the director of the host Research Center, or their delegate, shall send a copy of the invitation letter and of the student's signed copy along with all other relevant documents to the Office of Graduate Studies to facilitate the processing of the entry visa in coordination with the Human Resources Department. For visiting students, who are invited to undertake specific academic or research assignments, the Human Resources Department, in coordination with the Office of Graduate Studies, shall finalize recruitment procedures and prepare contracts for those students; such contracts shall specify their financial obligations, work assignments, and their direct supervisory entity. The contracts shall also specify that visiting students shall be responsible for maintaining their own living and health insurance obligations. The contract may be instantly terminated for the student's misbehavior or failure to undertake the functional assignments. All termination processes shall be subject to the relevant



- rules and regulations implemented at Qatar University.
- Visiting students, who are interested in seeking admission to a graduate program and are qualified for admission must fulfil the following additional program requirements:
    - Abide by the common QU admission requirements and complete an electronic admission form
    - Submit evidence of their admission at an accredited higher education institution two weeks prior to the beginning of the academic semester.
  - A visiting student intending to conduct research with a QU faculty member(s) must obtain consent from the faculty as well as from the Program Coordinator, Associate Dean for Research and Graduate Studies, college Dean (or Center Director) in addition to the approval of the Dean of Graduate Studies. In such cases, the approval request shall be submitted together with the student's research plan and the consent from both the program coordinator, or his delegate, and the student's supervisor outside Qatar. The approval must include evidence of the QU faculty's inclusion in the supervision committee and/or inclusion as an author on the publication resulting from the thesis research.
  - The student shall register for the required graduate courses or the thesis/dissertation with credit hours in accordance with the research plan. The student shall pay the due fees and shall eventually obtain detailed – statement/certificate showcasing his attended courses, credit hours, and the grades he obtained during his period of study at QU.
  - The student's status shall appear in the transcript statement/certificate as a visiting student.
  - A visiting student shall be eligible to attend Qatar University for a maximum duration of four (4) consecutive or intermittent academic semesters according to the agreed study/research plan of the program and the visiting student. Upon the Dean's request for exceptional circumstances, the Vice President for Research and Graduate Studies may extend the duration of study/research.
  - In the event of any violation of the agreed study/research plan, the registration of the student will be closed and the student will be dismissed from graduate study. Based on the recommendation of the thesis supervisor, program coordinator/department head, and the Associate Dean for Research and Graduate Studies, the Dean of Graduate Studies shall request the Registration Office to implement the academic dismissal. A transcript statement/certificate shall be issued showcasing the courses, credit hours and grades obtained during the period of study at the University.
  - A visiting graduate student shall incur all costs associated with his visit to Qatar University, including health insurance, air tickets and accommodation unless otherwise provided for under agreements concluded with the institution to which he belongs.







## CHAPTER 8.

### ACADEMIC ADVISING

Academic advising is an ongoing partnership between students and the program coordinator as well as their thesis or dissertation advisors that helps students to attain their academic, research progress, personal, and career goals.

The program coordinator serves as the primary link between the student's academic program and other resources available at the university. In order to assist students in making informed choices about their study plan, program coordinators help students identify available sources, opportunities and options while also communicating accurate and timely information about academic policies and procedures, programs, resources, and possible career opportunities. Program coordinators also assist students with course selection, registration, and educational planning.

Although program coordinators at QU actively assist students in making effective academic choices, students are personally responsible for planning their academic program to meet all graduation requirements. Therefore, students are encouraged to take the lead in developing an association with their program coordinators by communicating with them on a routine basis. Through regular contact with their advisors (program coordinators and thesis or dissertation advisor), students develop essential communication, decision-making, and problem-solving skills and become actively engaged in their educational expedition, thereby making it a richer experience.

## CHAPTER 9.

### COLLEGES AND DEGREES

#### COLLEGE OF ARTS AND SCIENCES

Male Section, Corridor 2, Dean's Office B111

Phone: (974) 4403-4500

Email: [cas@qu.edu.qa](mailto:cas@qu.edu.qa)

<http://www.qu.edu.qa/artssciences/>

##### Dean

Prof. Ahmed Elzatahry

##### Associate Deans for Academic Affairs

- **Prof. Ahmed Abu Shouk**, as the Associate Dean of Humanities and Social Sciences
- **Dr Fatma Mohammed Al-Sowaidi**, as the Associate Dean of Languages, Communication and Translation
- **Dr Leena Al Sulaiti**, as the Associate Dean of Sciences and Applied Sciences

##### Assistant Dean for Student Affairs

Mrs Muneera Al-Subaiey

#### About The College

The College of Arts and Sciences offers a variety of quality academic majors in a number of departments, comparable to those in other national and international educational institutions. The College applies rigorous academic standards in order to prepare students for leadership roles in a complex global society. It strives to graduate young men and women who are dedicated to the enhancement of knowledge and scientific research, and who are critical thinkers, independent lifelong learners, and responsible citizens.

#### Degree Offerings

Qatar University offers two types of Master's degrees: (1) A research-oriented degree culminating in a research-based experience typically in the form of a thesis and (2) a professional Master's degree, which is practical in nature and emphasizes professional knowledge beyond the baccalaureate degree.

The College of Arts and Sciences offers the following graduate degree programs:

Master of Arts in Gulf Studies (Research Track)

Master of Arts in Arabic Language and Literature (Research Track)

Master of Science in Applied Statistics (Research and Professional Track)

Master of Science in Environmental Sciences (Research and Professional Track)

Master of Science in Materials Science and Technology (Research and Professional Track)

Ph.D. in Biological and Environmental Sciences

Ph.D. in Gulf Studies

#### Master of Arts in Gulf Studies

Main Men's Building Room 112 (Men's Section)

Phone: (974) 4403-4987

Email: [gulfstudiesprogram@qu.edu.qa](mailto:gulfstudiesprogram@qu.edu.qa)

Website:

<http://www.qu.edu.qa/artssciences/gulfstudies/index.php>

##### Director of the Gulf Studies Center

Dr. Mahjoob Zweiri

##### Program Coordinator

Dr. Amr Al-Azm

#### ABOUT THE PROGRAM

The Gulf region, rich in history and culture, is one of the fastest changing and most important economic and political regions in the world.

The M.A. in Gulf Studies at Qatar University offers students the opportunity to examine the Gulf while living in the region itself. The program benefits from expert regional and international faculty, comprised of highly regarded academics in the Gulf Studies field. The program's academic rigor prepares students to be experts in the Gulf and understand the challenges and opportunities facing the region.

This in-depth and interdisciplinary curriculum, taught in English, provides a holistic examination of the region that includes:

- Politics and civil society
- Economics and development
- International relations
- Security
- Environment
- Advanced research methodology
- Culture, media and technology
- History
- Role of the energy industry in the Gulf
- Arabian Literature

Academic study helps students hone critical thinking skills and abilities such as:

- Writing and communication
- Analytical thinking
- Research methodology and skills
- Working within a multicultural environment
- Discussing and understanding diverse perspectives

#### PROGRAM OBJECTIVES

- Advance analytical approach to politics, economics, and social issues of the region
- Provide the means towards human capacity building
- Foster the integration of a broad knowledge base and human capacity building
- Address society's needs and aspirations
- Support Qatar National Vision 2030 for human, social, economic and environmental development

#### EDUCATIONAL OBJECTIVES ARE:

- To address society's needs by developing human capacity equipped with a broad research-oriented training in the social sciences.
- To establish a firm foundation from which students can progress onward to related doctoral studies.
- To advance students' analytical capabilities in history and in the social sciences and to develop their appreciation of different approaches to the study of the politics, economies, societies, and the modern history of the Gulf and the Middle East in general.
- To enable students to engage in advanced study of socio-economic problems and policy issues pertaining to the Gulf region and the Middle East more generally.
- To develop students' research abilities and their understanding of the relationship between conceptual tools, a theoretical framework and methodological approaches.

#### LEARNING OUTCOMES

- Students will apply independent research skills.
- Students will apply social science concepts from different disciplines to their study on the Gulf region.
- Students will analyze the social and political dynamics of the Gulf States.
- Students will evaluate the modern Gulf in relation to either the economic, political, historical, cultural or social setting in global context.

#### ADMISSION REQUIREMENTS

All applicants to the Master of Gulf Studies program who meet the following minimum criteria will be considered for admission to Qatar University:

- Completed a Bachelor degree with a GPA of at least 2.8 out of 4.0
- Achieved a minimum score of 520 on the paper-based TOEFL (score of 68 on the iBT, score of 190 on the cBT) or IELTS score of 6 taken within 2 years of the start of the intended semester of admission. (Not required for candidates with degrees from a program in which English was the language of instruction.)
- Students must submit a complete application portfolio. Qualified students with complete applications will be invited for a personal interview with the Gulf Studies Admission Committee.

All applicants to the Master of Art in Gulf Studies program are required to submit the following documents to the Admission Department:

- Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL score report or equivalent score report
- Two recommendation letters.
- Curriculum Vitae (C.V.)
- Health Certificate issued inside Qatar (International students please refer to International Students Website)
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport; international students please refer to International Students Website)
- Two (2) recent identical passport size photographs (size 4 x 6 cm) with white background
- Application Fees

Visit the Gulf Studies website for more information on application requirements:



<http://www.qu.edu.qa/artsscience/gulfstudies/admissions.php>

## DEGREE REQUIREMENTS

### Master of Arts in Gulf Studies

A minimum of 36 credit hours are required to complete the Master of Arts in Gulf Studies, including the following:

- A minimum of 21 credit hours of core courses
- A minimum of 15 credit hours of elective courses

#### Core Requirements (21 credit hours)

- GULF 500 Advanced Research Methodology
- GULF 510 Contemporary History and Politics in the Gulf
- GULF 520 State and Society in the Gulf
- GULF 530 International Relations of the Gulf
- GULF 531 Political Economy of the Gulf
- GULF 695 Thesis

#### Major Electives (15 credit hours)

- GULF 511 Politics of the Gulf
- GULF 521 City and Society in the Gulf
- GULF 523 Human Rights and the Gulf State
- GULF 524 The Arabian Peninsula Literature and Culture
- GULF 532 Security of the Gulf States
- GULF 533 Global Energy Geopolitics
- GULF 540 Environment and Climate Ecology
- GULF 550 Media and Information Communication Technology in the GCC
- GULF 560 Special Topics 1
- GULF 561 Special Topics 2
- Passing the Defense Exam

## STUDY PLAN

### Master of Arts in Gulf Studies

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GULF 500	Advanced Research Methodology	3
	GULF 510	Contemporary History and Politics in the Gulf	3
	GULF 520	State and Society in the Gulf	3
Total			9

Spring	GULF 530	International Relations of the Gulf	3
	GULF 531	Political Economy of the Gulf	3
	GULF xxx	Elective	3
Total			9

SECOND YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GULF 695	Thesis 1	3
	GULF xxx	Elective	3
	GULF xxx	Elective	3
Total			9
Spring	GULF 695	Thesis 2	3
	GULF xxx	Elective	3
	Gulf xxx	Elective	3
Total			9

## Master of Arts in Arabic Literature and

### Language

Women's Main Building, Room 112 (Women's Section)

Phone: (974) 4403-4820

Email: [headdeparabic@qu.edu.qa](mailto:headdeparabic@qu.edu.qa)

Website:

[http://www.qu.edu.qa/artsscience/graduate\\_programs.php](http://www.qu.edu.qa/artsscience/graduate_programs.php)

#### Head of Department of Arabic Language

Prof. Rachid Buzian

### Program Coordinator

Dr. Mustafa Buanani

### ABOUT THE PROGRAM

The establishment of a Master's Program in Arabic Literature and Language resonates with the considerable focus the University is paying to scientific research, as is clearly referred to in the University Strategic Plan, and consistent with Qatar's vision to develop the field. In addition, there is a vested interest in Arabic Literature and Language, considering that QU is a national university and places the identity and needs of Qatari society at the top of its priorities.

### EDUCATIONAL OBJECTIVES

The master's program at the Department of Arabic Language and Literature aims to achieve the following objectives:

1. Develop students' research skills in literature and criticism, and Linguistics
2. Prepare researchers and scholars who are active socially and culturally in the fields of literature, Linguistics and criticism.
3. Consolidate the integration between the Arab and Islamic heritage.
4. Deepen knowledge of comparative culture & literature, to promote communication and dialogue with other cultures.

### LEARNING OUTCOMES

After successfully completing the required courses and preparing a thesis, the graduate student will be able to:

1. Achieve a high level of specialized academic research.
2. Utilize his/her high intellectual capability in dealing with sources relevant to his/her specialization.
3. Invest his/her knowledge (present and future) in serving his/her local, Arab and Muslim community.
4. Master the skills of critical, linguistic and literary analysis in various arts.
5. Communicate effectively using the Arabic language (written and orally).

### POTENTIAL CAREERS

Upon obtaining a master degree in the Arabic Literature & Language, graduates may use their scientific and academic skills to strengthen the existing research atmosphere at the university, and apply to the following jobs:

- A researcher in specialized cultural centers, including:
  1. Center of Dialogue of Civilizations
  2. Al-Jazeera Center for Strategic Studies
- Arabic language lecturer
- University Teaching Assistant
- Any job that requires applicants who display mastery and a high level of knowledge about the Arabic language.

### ADMISSION REQUIREMENTS

All applicants to the Master of Arts in Arabic Literature and Language program who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Bachelor Degree in Arts with a concentration in Arabic Language and Literature from Qatar University, with a minimum cumulative GPA of 2.80 out of 4.00 or equivalent from a university or college accredited by an international accrediting association, the Ministry of Higher Education, or another comparable institution in that country.
2. For applicants applying to the Comparative Cultural Studies concentration of the Master of Arabic Language program, they are required to achieve a minimum score of 520 on the paper-based TOEFL or equivalent test taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. A satisfactory performance in the personal interview with the Admission Committee.

Admission to the Master of Arts in Arabic Literature and Language program is offered in the fall semester only. For additional information on the program, please contact us at [headdeparabic@qu.edu.qa](mailto:headdeparabic@qu.edu.qa)

### APPLICATION PROCEDURE:

All applicants to the Master of Arts in Arabic Literature and Language program are required to submit the following documents to the Admissions Department:

- Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL score report or equivalent score report (Only required for applicants to the Comparative Cultural Studies concentration) or other evidence of English proficiency in accordance with QU Policy.
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application Fees

## DEGREE REQUIREMENTS

### Master of Arts in Arabic Language and Literature

A minimum of 33 credit hours are required to complete the Master of Arts in Arabic Language and Literature, which includes the following:

- A minimum of 9 credit hours in Major Core Requirements
- A minimum of 24 credit hours of in one of the three concentration areas offered by the program, including:
- Concentration Area Core Requirements: A minimum of 18 credit hours in the concentration area core requirements package.
- Concentration Area Electives: A minimum of 6 credit hours in the concentration area electives package.
- Passing the Oral Defense Exam.

For students holding a bachelor degree in a discipline other than Arabic, student may be required to complete additional bridge courses as specified at admission time.

#### Major Core Requirements (9 CH)

The following courses must be completed by all Master of Arts in Arabic Language and Literature students:

- ARAB 524 Practical Applications
- ARAB 548 Thesis

#### Concentration in Linguistics (24 CH)

Students must complete a minimum of 18 credit hours in concentration core requirements and 6 credit hours in concentration electives.

#### Linguistics Concentration Core Requirements (18 CH)

Students must complete a minimum of 18 credit hours in the concentration core requirements package, including:

- ARAB 500 Theory and Research Methodology - Linguistics
- ARAB 502 Seminar in Linguistics
- ARAB 505 Arabs Linguistic Thought
- ARAB 507 Phonetics and Phonology
- ARAB 509 Lexicography and Terminology
- ARAB 510 Syntax

#### Linguistics Concentration Electives (6 CH)

Students must complete a minimum of 6 credit hours in the concentration electives package, including:

- ARAB 513 Paleography
- ARAB 518 Sociolinguistics
- ARAB 519 The Arabic Language in the World

- ARAB 520 Arabic Dialectology
- ARAB 521 Discourse Analysis

#### Concentration in Literature and Literary Criticism (24 CH)

Students must complete a minimum of 18 credit hours in concentration core requirements and 6 credit hours in concentration electives.

#### Literature and Literary Criticism Concentration Core Requirements (18 CH)

Students must complete a minimum of 18 credit hours in the concentration core requirements package, including:

- ARAB 501 Theory and Research Methodology - Literature
- ARAB 503 Seminar in Literature & Literary Criticism
- ARAB 506 Arabs Critical and Rhetoric Thought
- ARAB 508 Contemporary Literary Theory
- ARAB 511 Issues in Arabic Poetry
- ARAB 522 Modern Arabic Narrative Genres

#### Literature and Literary Criticism Concentration Electives (6 CH)

Students must complete a minimum of 6 credit hours in the concentration electives package, including:

- ARAB 513 Paleography
- ARAB 517 Literature and Theories of Contemporary Psychoanalysis
- ARAB 521 Discourse Analysis
- ARAB 523 Studies in Gulf Literature
- ARAB 525 Cultural Criticism

#### Concentration in Comparative Cultural Studies (24 CH)

Students must complete a minimum of 18 credit hours in concentration core requirements and 6 credit hours in concentration electives.

#### Comparative Cultural Studies Concentration Core Requirements (18 CH)

Students must complete a minimum of 18 credit hours in the concentration core requirements package including:

- ARAB 501 Theory and Research Methodology - Literature
- ARAB 504 Seminar in Comparative Cultural Studies
- ARAB 514 The History of Literary Criticism
- ARAB 515 Philosophy and Critical Thought
- ARAB 516 Post-Colonial Literature
- ARAB 525 Cultural Criticism

#### Comparative Cultural Studies Concentration Electives (6 CH)

Students must complete a minimum of 6 credit hours in the concentration electives package, including:

- ARAB 512 Theory of Metaphor
- ARAB 521 Discourse Analysis
- ARAB 526 Post Modernism
- ARAB 527 Global Comparative Literatures
- ARAB 528 Comparative Literature

#### Bridge Course Requirements Package (0-12 CH)

At admission time, student may be required to complete up to 24 CH from specific courses listed in the following bridging course package. The credit hours allocated to the Bridge Course Requirements courses are not counted towards satisfying the 33 credit hours required by the program.

- ARAB 550 Arabic Literature A History of its Origins and Evolution
- ARAB 551 Linguistics
- ARAB 552 Principles and Methods of Literary Criticism
- ARAB 553 Grammar, Morphology and Philology

## STUDY PLAN

### Master of Arts in Arabic Literature and Language - Linguistics Concentration

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	CH
Fall	ARAB 501	Theory and Research Methodologies	3
	ARAB 503	Seminar in Literature & Literary Criticism	3
	ARAB 506	Critical and Rhetoric Thought Among Arabs	3
Total			9
Spring	ARAB 507	Phonetics and Phonology	3
	ARAB 509	Lexicography and Terminology	3
	XXX	Elective course	3

Total	9
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SECOND YEAR (21 CREDIT HOURS)			
Term	Course #	Course Title	CH
Fall	ARAB 522	Syntax	3
	ARAB 524	Practical Applications	3
	ARAB 548	Thesis	6
Total			12
Spring	XXX	Elective course	3
	ARAB 548	Thesis	6
Total			9

### Master of Arts in Arabic Literature and Language - Literature and Criticism Concentration

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	CH
Fall	ARAB 501	Theory and Research Methodologies	3
	ARAB 503	Seminar in Literature & Literary Criticism	3
	ARAB 506	Critical and Rhetoric Thought Among Arabs	3
Total			9
Spring	ARAB 508	Contemporary Literary Theory	3
	ARAB 511	Issues in Arabic Poetry	3
	XXX	Elective course	3
Total			9



SECOND YEAR (21credit hours)			
Term	Course #	Course Title	CH
Fall	ARAB 522	Narrative of Modern Arabic Literature	3
	ARAB 524	Practical Applications	3
	ARAB 548	Thesis	6
Total			12
Spring	XXX	Elective course	3
	ARAB 548	<u>Thesis</u>	6
Total			9

SECOND YEAR (21credit hours)			
Term	Course #	Course Title	CH
Fall	ARAB 525	Cultural Criticism	3
	ARAB 524	Practical Applications	3
	ARAB 548	Thesis	6
Total			12
Spring	XXX	Elective course	3
	ARAB 548	<u>Thesis</u>	6
Total			9

### Master of Arts in Arabic Literature and Language - Comparative Cultural Studies Concentration

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	CH
Fall	ARAB 501	Theory and Research Methodologies	3
	ARAB 504	Seminar in Comparative Cultural Studies	3
	ARAB 514	The Hist.of Literary Criticism	3
Total			9
Spring	ARAB 508	Philos. & Critical Thought	3
	ARAB 511	Post-Colonial Literature	3
	XXX	Elective course	3
Total			9

### Master of Science in Applied Statistics

College of Sciences Building, Room A 107 (Male's Section)

Phone: (974) 4403-4622

Email: [headdepmath\\_physics@qu.edu.qa](mailto:headdepmath_physics@qu.edu.qa)

Website: <http://www.qu.edu.qa/artsscience/mathphysta/>

#### Head of Department of Math, Physics and Statistics

Dr. Leena Al Sulaiti

#### Program Coordinator

Dr. Abdel-Salam Gomaa

#### ABOUT THE PROGRAM

The Master of Science in Applied Statistics degree program provides advance training in applied statistics, exposure to statistics in a consulting or collaborative research environment and specialized coursework in a number of areas of emphasis.

This program is the first graduate program in statistics in the State of Qatar and aims to meet the needs for talented statisticians who can actively and more effectively participate in data analysis in various fields.

Statistics is a dynamic and diverse field of study where methods and theories continue to develop at a very fast pace.

The undergraduate degree in Statistics is an extremely useful initial step toward understanding modern statistical methods. However, graduate study in statistics is necessary to provide a deeper understanding of statistical methodology and to provide a broader set of mathematical and statistical skills for proper use of newly developed statistical procedures.

#### MISSION

The goal of the Master of Science in Applied Statistics program at Qatar University is to provide highly specialized graduates with rigorous training in statistics with an emphasis on Applied Statistics so as to enable them to provide professional statistical training and consulting services to the various academic and professional sectors in the Qatari and non-Qatari societies.

#### OBJECTIVES

The Master of Sciences in Applied Statistics program is an extension to the existing undergraduate program. The Master program in Applied Statistics aims to prepare students to:

1. Gain advanced knowledge in Applied Statistics.
2. Promote quantitative research in Qatar and the global society.
3. Gain good communication, presentation and interpersonal (team-working) skills to further develop using assignment work, seminars, presentations and class discussion.

#### LEARNING OUTCOMES

The Program will use the following five learning outcomes to assess the students learning.

- Extend their knowledge with an emphasis on the fundamentals of Statistics.
- Perform scientific statistical analysis on an innovative level in their career.
- Use Statistical software packages to implement new Statistical methods.
- Critically evaluate the statistical analyses in scientific literature for publications relevant to Statistics.
- Communicate effectively with statistical users

#### POTENTIAL CAREERS

Employment opportunities for graduates from the program include but are not limited to the following:

- Qatar Statistics Authority (QSA)

- Qatar University and other Universities all over the world
- Hamad Medical Corporation (HMC)
- Supreme Council of Education
- Ministry of Interior
- Qatar Airways
- Qatar Petroleum
- Ooredoo (Q-Tel)
- Qatar Foundation
- Local and International Banks
- QF Research Institutes
- Sidra
- Qatar Bio Bank

#### ADMISSION REQUIREMENTS

The Master of Science in Applied Statistics program is accessible to students with first degrees in a quantitative discipline such as Mathematics, Statistics, Computer Science, and Engineering. Students with a degree in a discipline other than statistics may be required to complete Bridging courses.

All applicants to the Master of Science in Applied Statistics program who meet the following minimum criteria will be considered for admission to Qatar University:

1. Applicants who completed a Bachelor level or an equivalent degree or a higher level degree in Mathematics, Statistics, Science, Engineering, or a related field with a minimum cumulative GPA of 2.80 out of 4.00 or equivalent from a university or college accredited by an international accrediting association, or by the Ministry of Higher Education or comparable authority in that country may be admitted to either the research or the professional tracks offered by the program.
2. Applicants who completed a Bachelor level or an equivalent degree or a higher level degree in Mathematics, Statistics, Science, Engineering or in a related field with a minimum cumulative GPA of 2.5 out of 4.0 may be admitted only in the professional (project) track of the program. Students must attain a GPA of 3.0 or higher in the first semester. Students must register for a minimum of two regular courses in the field of study in the first semester. If a student fails to attain 3.0 or higher in the first semester, the student will automatically be dismissed from the program.
3. Achieved a minimum score of 520 on the paper-based TOEFL or its equivalent taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a program where English was the language of instruction.
4. A satisfactory performance in the personal interview with the Admissions Committee.

5. In addition to the above three criteria, admission in the Research (Thesis) track is subject to approval by the Program Coordinator and the dean of Graduate Studies.

All applicants to the program Master of Science in Applied Statistics program are required to submit the following documents to the Admissions Department:

- Admissions Application and Signature Page
- Final, official and certified university transcript
- Official TOEFL or equivalent score report or proof of English as official language at the University where he/she received B.Sc.
- Two Confidential recommendation letters from undergraduate professors or employers.
- Curriculum Vitae (C.V.)
- Personal Statement
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent passport sized photographs
- Application Fees

#### DEGREE REQUIREMENTS

A minimum of 30 credit hours are required to complete the Master of Applied Statistics program including the following:

- A minimum of 12 credit hours in Major Requirements (Thesis Track)
- A minimum of 15 credit hours in Major Requirements (Project Track)
- A minimum of 12 credit hours in Major Electives
- A minimum of 6 credit hours in Thesis OR Project option requirements

For Research Track: Passing the Oral Defense Exam.

#### Major Requirements Package (12 CH)

The following courses must be completed by all Master of Applied Statistics students:

- STAT 611: Probability Theory
- STAT 612 Mathematical Statistics
- STAT 613 Applied Linear Models
- STAT 614 Sampling Techniques

#### MAJOR ELECTIVES PACKAGE (12CH):

Students must complete 12 CH from the following courses:

- STAT 617 Statistical Computation and Simulation
- STAT 621 Applied Stochastic Processes
- STAT 622 Large Sample Theory
- STAT 626 Bayesian Statistical Inference
- STAT 678 Applied Multivariate Analysis
- STAT 680: Special Topics

#### Thesis Option Package (6 CH)

Students admitted in the Research track must complete the following courses:

- STAT 690 Master Thesis

#### Project Option Package (6 CH)

Students admitted to the professional track must complete the following courses:

- STAT 665 Statistical Consulting
- STAT 695 Master's Project

#### Bridge Course Requirements Package

In instances where students may not have the needed level of statistical knowledge, they will be asked to study and to pass some or all the following bridge courses before starting the Master program (Depending on the educational background of the student):

- Stat 501: Mathematical Statistics
- Stat 502: Applied Statistical Methods

#### STUDY PLAN

#### Master of Science in Applied Statistics

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	Credit Hrs
Fall	STAT 611	Probability Theory	3
	STAT 612	Mathematical Statistics	3
	Elective 1	Depends on the selected topic	3
Total			9

Spring	STAT 613	Applied linear models	3
	STAT614	Sampling Techniques	3
	Elective 2 (for Thesis' Track)	Depends on the selected topic	3
	(for Project' Track)	STAT 665 Statistical Consulting	
Total			9

SECOND YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	Elective 3	Depends on the selected topic	3
	Elective 4	Depends on the selected topic	3
	Elective 5	Depends on the selected topic	3
Total			9
			Track
		Project	Thesis
Spring	STAT 695	Master's Project	3
	STAT 690	Master Thesis	6
Total			3 6

#### Master of Science in Environmental Science

College of Sciences Building,

Room 222 (Women's Section)

Phone: (974) 4403-4565 / 4566

Email: [biology@qu.edu.qa](mailto:biology@qu.edu.qa)

Website: <http://www.qu.edu.qa/artsscience/bioenvi/>

#### Head of Department of Biological and Environmental Sciences

Mohammed Abu-Dieyeh

#### ABOUT THE PROGRAM

The M. Sc. in Environmental Science Program is a rigorous yet flexible (full-time & part-time) program, started in Fall 2011. It addresses the need for a workforce that can solve a broad range of burgeoning environmental issues. It is considered to be a very promising opportunity for reaching Excellence in Environmental Science in a University giving high priority to scientific research.

This M. Sc. program is taught by world class scientists/experts in the field. It prepares students for research in environmental science, for doctoral study, and for technical positions in universities, industry or governmental agencies.

This program is based on an interdisciplinary approach. Students learn to develop analytical tools and models, as well as technologies, socio-political arrangements to prevent and control environmental and sustainability issues. The curriculum emphasizes advanced principles of environmental science in areas such as conservation, pollution, marine ecology, global change, environmental law and economics, and sustainable development. Being multidisciplinary in nature, this program will serve a wide variety of post-graduate students who may have diverse backgrounds and goals.

#### MISSION

The M.Sc. Environmental Science Program is dedicated to the graduation of professionals and researchers who are committed to the development of a sustainable future for Qatar.

The program aims to provide a nationally prominent, interdisciplinary graduate program in environmental science that is the first choice of students, and one that provides every graduate with the acumen, literacy and knowledge of the environment that empowers them to be responsible and active citizens, with a deep social conscience.



## OBJECTIVES

This M.Sc. program addresses the need for a workforce that can solve a broad range of burgeoning environmental issues. It prepares students for research in environmental science, for doctoral study, and for technical positions in universities, industry or governmental agencies. The curriculum emphasizes advanced principles of environmental science in areas such as conservation, pollution, marine ecology, global change, environmental law and economics, and sustainable development. Being multidisciplinary in nature, this program will serve a wide variety of post-graduate students who may have diverse backgrounds and goals.

We would like to attain the following objectives:

1. Develop the student's sense of community, effective engagement with others, responsibility, integrity and ethics
2. Develop the student's foundation skills and the understanding necessary to comprehend, evaluate and solve a plethora of environmental problems and issues.
3. Explain the utility and dimension of the technologies available to the graduate students in their studies about the environment.
4. Explain how to communicate effectively and decisively as professionals, in diverse settings and communities, on an eclectic range of environmental issues.

## LEARNING OUTCOMES

Graduates of the Master of Science in Biological Science will be able to:

- Operate effectively as a team member
- Apply national and international environmental laws and regulations, specifically those relevant to the development of the environmental policy of the State of Qatar
- Apply analytical skills to choose solutions to environmental concerns of relevant industries in the region using interdisciplinary approaches
- Apply research methodologies to analyze Environmental issues
- Demonstrate communication skills about environmental issues

## POTENTIAL CAREERS

Excellent opportunities are available for graduates of this program, both in the public and the private sectors. These include professional services (ex. legal consultations, urban planning); research & development services (on natural sciences, social sciences/humanities) and other business services. Furthermore, various ministries (e.g. Health,

Environment, Agriculture) are among the potential employers of these M.Sc. holders. Teaching and research institutions are also potential workplaces for these degree holders.

## ADMISSION REQUIREMENTS

All applicants to the Master of Science in Environmental Sciences program who meet the following minimum criteria will be considered for admission to Qatar University:

- Applicants who completed a Bachelor level or an equivalent degree or a higher level degree in Science, Engineering, or a related field with a minimum cumulative GPA of 2.80 out of 4.00 or equivalent from a university or college accredited by an international accrediting association, or by the Ministry of Higher Education or comparable authority in that country may be admitted to either the research or the professional tracks offered by the program.
- Applicants who completed a Bachelor level or an equivalent degree or a higher level degree in Science, Engineering or in a related field with a minimum cumulative GPA of 2.5 out of 4.0 may be admitted only in the professional (project) track of the program. Students must attain a GPA of 3.0 or higher in the first semester. Students must register for a minimum of two regular courses in the field of study in the first semester. If a student fails to attain 3.0 or higher in the first semester, the student will automatically be dismissed from the program.
- Achieved a minimum score of 520 on the paper-based TOEFL or equivalent test taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
- Passing an interview with the College's admission panel. The panel may request additional bridging course(s).

All applicants to the Master in Environmental Science program are required to submit the following documents to the Admissions Department:

- Admissions Application and Signature Page
- Final, official and certified university transcripts

Students are expected to be proficient in English. Thus, applicants are required to demonstrate their English proficiency as part of the admission process by satisfying either of the following: (\*) Earned a previous degree from an institution of higher education in a Program where English was the language of instruction.

**OR**

(\*\*) Achieved a minimum score of 520 on the paper-based

TOEFL or equivalent test taken within 2 years of the start of the intended semester of admission

- Two confidential [recommendation letters](#) from undergraduate professors or employers (Recommendation Letters should be sent by the professor to the following address: [biology@qu.edu.qa](mailto:biology@qu.edu.qa))
- Curriculum Vitae (C.V.)
- Health Certificate
- Photocopy of the applicant's Qatar ID card
- (Non-Qatari applicants must provide a copy of their passport)
- Two recent passport sized photographs
- Application Fees: QR 350

Admission to the Master of Science in Biological Sciences program takes place in the fall semester only.

For additional information on the program, please see our website at: <http://www.qu.edu.qa/artsscience/departments/bioenv/programs/MSc%E2%80%93EnvScience>

## DEGREE REQUIREMENTS

### Master of Science in Environmental Science

A minimum of 34 credit hours are required to complete the Master of Science in Environmental Sciences, including the following:

- A minimum of 13 credit hours of core requirements courses.
- A minimum of 21 credit hours in either the project option or the thesis option as detailed below:
  - **Project Option:** Students admitted in the professional track must complete a minimum of 6 credit hours in Project Option Required Courses and 15 credit hours of Major Elective courses.
  - **Thesis Option:** Students admitted in the research track must complete a minimum of 9 credit hours in Thesis Option Required Courses, 12 credit hours of Major Elective courses and passing the oral defense exam.

### Major Electives (12 or 15 credit hours depending on the selected option)

Students must complete a minimum of 12 credit hours in thesis option or 15 credit hours in project option. The minimum required number of credit hours may be taken from courses listed in the major electives

### Core Requirements (13 credit hours)

- BIOL 501 Earth Systems

- BIOL 504 Environmental Chemistry
- BIOL 505 Graduate Seminar in Environmental Science
- BIOL 506 Microbiological Processes in Environmental Systems
- BIOL 507 Regulation, the Environment and Qatar Public Policy

### Thesis Option Required Courses (9 credit hours)

- BIOL 503 Experimental Design and Statistical Analysis
- BIOL 530 Graduate Research and Thesis

### Major Electives: Thesis Option (A minimum of 12 CH)

Course #	Course Title	CH
BIOL 502	Geographic Information Systems (GIS) and Databases	3
BIOL 511	Environmental Health and Safety	3
BIOL 513	Epidemiology	3
BIOL 515	Air Pollution	3
BIOL 517	Environmental Biosafety and Biosecurity	3
BIOL 512	Environmental Bioethics	3
BIOL 514	International Environmental Law	3
BIOL 518	Water and Human Development	3
BIOL 520	Environmental Toxicology and Pollution	3
BIOL 521	Marine Environment and Human Development	3
BIOL 522	Renewable Energy Resources and Global Change	3
BIOL 523	Biological Conservation and Biodiversity in Qatar	3
BIOL 524	Environmental Genomics and Bio-Engineering	3
BIOL 525	Solid Waste Management	3

## STUDY PLAN

### Master of Science in Environmental Science

Thesis Option

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	CH
Fall	BIOL 501	Earth Systems	3
	BIOL 504	Environmental Chemistry	3
	BIOL 506	Microbiological Processes in Environmental Systems	3
	BIOL 505	Graduate Seminar	1
Total			10
Spring	BIOL 503	Experimental Design and Statistical Analysis	3
	BIOL 507	Regulation, Environment, Qatar Policy	3
	BIOL 5XXX	Elective	3
	BIOL 5XXX	Elective	3
Total			12

SECOND YEAR (18 credit hours)			
Term	Course #	Course Title	CH
Fall	BIOL 5XXX	Elective	3
	BIOL 5XXX	Elective	3
	BIOL 530	Graduate Research and Thesis	3
Total			9
Spring	BIOL 530	Graduate Research and Thesis	3
Total			3

#### Project Option Required Courses (6 credit hours)

- BIOL 502 Geographic Information Systems (GIS) and Databases
- BIOL 510 Internship/Technical Report

#### Major Electives: Project option (A minimum of 15 CH)

Course #	Course Title	CH
BIOL 503	Experimental Design and Statistical Analysis	3
BIOL 511	Environmental Health and Safety	3
BIOL 513	Epidemiology	3
BIOL 515	Air Pollution	3
BIOL 517	Environmental Biosafety and Biosecurity	3
BIOL 512	Environmental Bioethics	3
BIOL 514	International Environmental Law	3
BIOL 518	Water and Human Development	3
BIOL 520	Environmental Toxicology and Pollution	3
BIOL 521	Marine Environment and Human Development	3
BIOL 522	Renewable Energy Resources and Global Change	3
BIOL 523	Biological Conservation and Biodiversity in Qatar	3
BIOL 524	Environmental Genomics and Bio-Engineering	3
BIOL 525	Solid Waste Management	3

#### STUDY PLAN

#### Master of Science in Environmental Science

Project Option

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	CH
Fall	BIOL 501	Earth Systems	3
	BIOL 504	Environmental Chemistry	3

	BIOL 506	Microbiological Processes in Environmental Systems	3
	BIOL 505	Graduate Seminar	1
Total			10
Spring	BIOL 502	GIS and Databases	3
	BIOL 507	Regulation, Environment Qatar Policy	3
	BIOL 5XXX	Elective	3
	BIOL 5XXX	Elective	3
Total			12
SECOND YEAR (18 credit hours)			
Term	Course #	Course Title	CH
Fall	BIOL 5XXX	Elective	3
	BIOL 5XXX	Elective	3
	BIOL 5XXX	Elective	3
Total			9
Spring	BIOL 510	Internship/Technical Report	3
Total			3

## Master of Science in Materials Science and Technology

College of Sciences Building (male side),

Corridor 4, Room D103

Phone: (974) 4403- 6804

Email: [mats@qu.edu.qa](mailto:mats@qu.edu.qa)

Website: <http://www.qu.edu.qa/msp/index.php>

#### Acting Coordinator

Dr. Talal Altahtamouni

#### ABOUT THE PROGRAM

Materials Science and Technology is a new interdisciplinary field needed in the modern society. The program focuses on the understanding of scientific principles, analysis and evaluation of the characteristics and behavior of materials, including microstructures, physical and chemical properties, energy thermodynamics of materials, transformation states and processes, compound materials and research on industrial applications of specific materials.

This is the first initiative MSc in Materials Science in Qatar and it will bring industry and some governmental institutes with academia to develop an important postgraduate program that can lead to a PhD degree and will serve Qatar vision 2030 to develop a knowledge-based economy. The program will deliver graduate education and research opportunities for students and professionals in 35 credit hours leading to the Master of Science in Materials Science and Technology.

The program will help in solving key issues facing the world in energy, environment, communication, healthcare and transport.

The understanding of the atomic and microscopic levels of materials through this program will lead to improvement of materials in several areas, such as new composites for more energy efficient applications, better radiation protection, safer biomaterials and greener materials for the environment.

#### MISSION

The program will provide students with an advanced interdisciplinary knowledge, skills, and training necessary for successful careers in industry or academic roles that are focused on materials, biomaterials, new alloys, and the selection of materials to meet modern technology goals. Graduates will be well trained to work collaboratively, conduct independent and multidisciplinary research, communicate effectively and recognize their role in solving global challenges, while promoting sustainable practice.

#### OBJECTIVES

The educational objectives of the program are to:

1. Prepare graduates to establish successful careers in industry, government or academia to pursue further graduate studies.



2. Provide graduates with interdisciplinary knowledge and skills for solving materials related problems and challenges while promoting sustainable practices.
3. Equip graduates with appropriate research methods and techniques to successfully conduct research or applied projects in the field of materials science and technology.
4. Prepare graduates to contribute to the advancement of the profession by addressing societal needs and through effective communication skills and collaboration with colleagues.

### LEARNING OUTCOMES

Graduates of the program will be able to:

1. Apply independent research skills to investigate materials science and technology related issues.
2. Apply scientific concepts to solve problems related to materials science and technology.
3. Analyze the properties of materials using appropriate characterization techniques.
4. Apply techniques to predict and explain materials properties and behavior.
5. Assess the synthesis and processing techniques appropriate for the production of materials.
6. Assess the environmental impact of materials and related methods and processes.
7. Communicate, effectively, materials science related issues orally and in writing.

### POTENTIAL CAREERS

The Materials Science and Technology program offers excellent opportunities for the graduates of this program in research, development, production, and management. They will also be suited to work in many entities in Qatar such as companies working on downstream, oil and gas, energy, environment, electronics aerospace industry, consumer industries, and in biomaterials and medical industries. Potential employers include but are not limited to:

- RasGas
- QP
- Shell
- QAPCO
- QChem
- QatarGas
- Ashgal
- Ministry of Environment
- Ministry of Defense
- Police
- Municipality
- Qatalum

- QMA
- Qatar Airways
- QU/ QF Research centers/ Institutes

### ADMISSION REQUIREMENTS

All applicants to the Master degree program in Materials Science and Technology need to satisfy the following minimum criteria to be considered for admission to the program:

All applicants to the Master of Science in Materials Science and Technology program who meet the following minimum criteria will be considered for admission to Qatar University:

Completed a Bachelor degree with a grade point average of at least 2.8 out of 4.0, or equivalent, from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or comparable in that country.

Students are expected to be proficient in English. Thus, applicants are required to demonstrate their English proficiency as part of the admission process by satisfying either of the following:

(\*) Earned a previous degree from an institution of higher education in a Program where English was the language of instruction.

**OR**

(\*\*) Achieved a minimum score of 520 on the paper-based TOEFL or equivalent test taken within 2 years of the start of the intended semester of admission

A satisfactory statement of purpose of 500 words.

A satisfactory performance in the personal interview with the Admission committee.

Students holding a Bachelor degree in disciplines other than Chemistry, Physics, and Mechanical, Industrial or Chemical Engineering may have to complete one or more bridge courses before starting this program based on the program admission committee decision.

### APPLICATION PROCEDURE

All applicants to the Materials Science Master program are required to submit the following documents to the Admissions Department:

- Admissions Application and Signature Page
- Final, official and certified university transcripts
- Official TOEFL score report or equivalent score report
- Two confidential academic or professional recommendation letters.
- Curriculum Vitae (C.V.)

- Health Certificate
- Photocopy of the applicant's Qatar ID card
- (Non-Qatari applicants must provide a copy of their passport)
- Two recent passport sized photographs
- Application Fees: QR 350

### DEGREE REQUIREMENTS

A minimum of 35 credit hours are required to complete the Master of Science in Materials Science and Technology for any of the two options offered by the program including the following:

- A minimum of 12 credit hours in Major Core Requirements
- A minimum of 23 credit hours as detailed below in either the Thesis Option or the Project Option

#### • Thesis Option:

- A minimum of 9 credit hours in the Thesis Option Requirements
- A minimum of 14 credit hours in the Major Elective Requirements.
- Passing Thesis defense Exam.

#### • Project Option:

- A minimum of 6 credit hours in the Project Option Requirements
- A minimum of 17 credit hours in in the Major Elective Requirements.

Students holding a bachelor degree in a discipline other than Chemistry, Physics, and Mechanical, Industrial or Chemical Engineering may have to complete one or more bridge courses prior to taking the program courses based on the program admission committee's decision. Thus, the following additional requirements apply:

- Students must complete 0 to 9 credit hours in the Bridge Course Requirements based on the program admission committee decision.

### Major Core Requirements (12 CH)

The following courses must be completed by all Master of Science in Materials Science and Technology students:

- MATS 511 Materials Principles and Characterization
- MATS 512 Thermodynamics and Kinetics of Materials
- MATS 513 Functional Properties of Materials
- MATS 514 Research Methodology
- MATS 580 Graduate Seminar

### Major Elective Requirements (14 or 17 CH)

Students selecting the Thesis Option must complete a minimum of 14 credit hours in major elective courses while students selecting the Project option must complete a minimum of 17 credit hours in major elective courses including:

- MATS 520 Mechanics of Materials
- MATS 525 Sustainable Materials
- MATS 530 Radiation Technology for Materials
- MATS 535 Physical Metallurgy
- MATS 540 Advanced Materials and Composites
- MATS 545 Polymers Science and Analysis
- MATS 550 Polymer Processing
- MATS 555 Metals and Minerals Processing
- MATS 560 Materials Science Modeling
- MATS 565 Surface Science and Corrosion
- MATS 570 Nanotechnology and Advanced Characterization Methods
- MATS 675 Special Topics

### Bridge Course Requirements Package (0 - 9 CH)

Students holding a bachelor degree in disciplines other than Chemistry, Physics, and Mechanical, Industrial or Chemical Engineering must complete 0 to 9 credit hours in Bridge Course Requirements prior to taking the program courses. The credit hours allocated to bridge courses are not counted towards satisfying the 35 credit hours required by the program.

Based on the program admission committee decision, students may be required to complete one or more of the following bridge courses:

- MATS 500 Modern Physics
- MATS 501 Physical Chemistry
- MATS 502 Materials Science

### Thesis Option Requirements (9 CH)

Students admitted in the thesis track must complete the following course:

- MATS 599 Thesis

For the Thesis option: passing the thesis defense exam.

### STUDY PLAN

#### Thesis option

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs

Fall	MATS 511	Materials Principles and Characterization	3
	MATS 513	Functional Properties of Materials	3
	MATS 514	Research Methodology	3
Total			9
Spring	MATS 512	Thermodynamics, Phase Diagrams and Kinetics of Materials	3
	MATS XXX	Elective Course 1	3
	MATS XXX	Elective Course 2	3
	MATS 580	Graduate Seminar	0
Total			9

SECOND YEAR (17 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	MATS XXX	Elective Course 3	3
	MATS XXX	Elective Course 4	3
	MATS 599	Thesis	3
	MATS 675	Special Topics	2
Total			11
Spring	MATS 699	Thesis	6
Total			6

#### Project Option Requirements (6 CH)

Students admitted in the professional track must complete the following course:

- MATS 690 Applied Materials Project

#### Non - Thesis Option

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	MATS 511	Materials Principles and Characterization	3
	MATS 513	Functional Properties of Materials	3
	MATS 514	Research Methodology	3
Total			9
Spring	MATS 512	Thermodynamics, Phase diagrams and Kinetics of Materials	3
	MATS XXX	Elective Course 1	3
	MATS XXX	Elective Course 2	3
	MATS 580	Graduate Seminar	0
Total			9

SECOND YEAR (17 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	MATS XXX	Elective Course 3	3
	MATS XXX	Elective Course 4	3
	MATS XXX	Elective Course 5	3
	MATS 690	Applied Materials Project	3

Total			12
Spring	MATS 690	Applied Materials Project	3
	MATS 675	Special Topics	2
Total			5

### PhD in Biological and Environmental Sciences

College of Sciences Building,

Room 222 (Women's Section)

Phone: (974) 4403-4565 / 4566

Email: [biology@qu.edu.qa](mailto:biology@qu.edu.qa)

Website: <http://www.qu.edu.qa/artssciences/bioenvi/>

#### Head of Department of Biological and Environmental Sciences

Dr. Mohammed Abu Dieyeh

#### ABOUT THE PROGRAM

The PhD program in Biological and Environmental Sciences is consistent with the current vision and mission of the QU, and very important in especially developing new ideas, approaches and findings in Biological and Environmental Sciences and, the advancement at the national and international levels through excellence in research and education. "Qatar University is the national institution of higher education in Qatar. It provides high-quality undergraduate and graduate programs that prepare competent graduates, destined to shape the future of Qatar".

In view of the rapid economic growth of Qatar, the future of Qatar is dependent on the local capacity building and innovation. This PhD program is a compulsory element required to carry out research & development in a country ready to give the required funds for innovation and build knowledge-based society. This PhD is a rigorous program, taught by world class scientists/experts in the field. It prepares students for research in biological and environmental sciences, for positions in universities, industry or governmental agencies.

It is the first PhD program in Biological and Environmental Sciences in Qatar. It is a flexible interdisciplinary program with

broad area of possible specialties. It is designed to address environmental and health concerns in Qatar and Gulf Countries. It will capitalize, especially, areas of national research priorities. It will provide an avenue to higher degrees to multiple MSc holders in the country.

#### MISSION

This proposed Ph.D. program in Biological and Environmental Sciences (Ph.D. BES) is an interdisciplinary program that builds on the earlier M.Sc. in Environmental Science and new M.Sc. In Biomedical Sciences. This program serves other biology based MSc degree holders upon approval of the program committee. This is the first PhD in Biological and Environmental Sciences in Qatar and the second PhD at Qatar University. The need for this unique program is of high importance to Qatar. The country has announced its National Vision 2030 which puts more challenge on the flagship university to create a new innovative, interdisciplinary and high quality PhD programs that can accommodate the small number of students with different science backgrounds yet give freedom for specializations in areas of national research priorities such as health and environmental domains.

Its mission is to provide students with the most advanced research skills enabling them to carry out research independently, publishing and showing innovations and creativity.

#### OBJECTIVES

The Ph.D. program in Biological and Environmental Sciences is established due to the significant needs of using applications of biological and environmental research and knowledge in improving health care and answering environmental questions that are of importance to the entire community in Qatar. This program prepares students for research in biological and environmental sciences for, academic positions in universities, industry or governmental agencies. The curriculum emphasizes more advanced principles of biological and environmental sciences in areas such as molecular and cellular biology, biotechnology, marine sciences, pollution, epidemiology, conservation of biodiversity and sustainable use of natural resources. Being multidisciplinary in nature, this program will serve a wide variety of MSc degree holders who may have diverse backgrounds and goals.

The main objectives of the program are:

- Provide graduate students with advanced academic knowledge, research and practical skills needed for successful careers in Biological and Environmental Science related jobs at various private institutions, governmental agencies, academia and industry.
- Provide interdisciplinary and multidisciplinary knowledge and research training and develop new ideas,



approaches and findings in Biological and Environmental Sciences.

- Establish partnerships with other research-intensive universities, governmental agencies, museums, international organizations and the private sector that will provide training and internships to facilitate applied research activity and future career opportunities.
- Explain how to communicate effectively as professionals in scientific forums and through international publications, while protecting his intellectual properties

This PhD degree can be obtained through a study plan composed of 4 concentrations in:

- Cell and Molecular Biology
- Environmental Sciences
- Ecosystems and Marine Sciences
- Biotechnology

### LEARNING OUTCOMES

Once the graduate student successfully defends his/her PhD, he/she will be able to:

- Design original research projects in accordance with the scientific research method.
- Apply advanced research methodology to address biological and environmental Science issues in accordance with the scientific research method.
- Integrate advanced interdisciplinary knowledge and perspectives to analyze biological and environmental issues.
- Critically analyze the validity and reliability of biological and environmental research findings.
- Demonstrate excellent oral and written communication skills.

### POTENTIAL CAREERS

There is a growing need for highly qualified research personnel equipped with advanced knowledge, strong research, and communication skills to participate effectively in developing and sustaining the research culture and future to address the needs of Qatar National Vision 2030.

Excellent opportunities are available for graduates of this program, both in the public and the private sectors. These include professional services, research & development services and other business services. Furthermore, various ministries (e.g. Health, Environment, Agriculture) are among the potential employers of these PhD holders. Academic and research institutions are also potential workplaces for these degree holders.

### ADMISSION REQUIREMENTS

Applicants are required to:

Have A Master's degree in biology, environmental science, or in a related field with minimum cumulative GPA of 3 out of 4 or equivalent from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or comparable in that country.

Students are expected to be proficient in English. Thus, applicants are required to demonstrate their English proficiency as part of the admission process by satisfying either of the following:

(\* ) Earned a previous degree from an institution of higher education in a Program where English was the language of instruction.

**OR**

(\*\*) Achieved a minimum score of 520 on the paper-based TOEFL or equivalent test taken within 2 years of the start of the intended semester of admission.

A satisfactory performance in the personal interview with the Admission committee.

GRE-General test score taken within less than 2 years prior to the start of the intended semester of admission, is not required but will strengthen the application.

During the admission process, students will be accepted in the desired concentration according to their former Master and Bachelor majors.

The following, while not part of the admission

Requirements will strengthen the application:

Evidence of an outstanding academic record and a strong motivation for scientific research. Previous research experience and publications are a plus.

During the admission process, students will be accepted in the desired concentration according to their earned Master and Bachelor degree majors.

### APPLICATION PROCEDURE

All applicants to the PhD degree in Biological and Environmental Sciences program are required to submit the following documents to the Admissions Department:

Admissions Application and Signature Page

Final, official and certified **university transcripts**

Official TOEFL score report or equivalent score report

Official GRE score report [**not required** but will strengthen the application].

Three confidential [recommendation letters](#) from Graduate professors or employers (Recommendation Letters (using CAS template) should be sent by the professor to the following address: [biology@qu.edu.qa](mailto:biology@qu.edu.qa) ).

- Curriculum Vitae (C.V.)
- Health Certificate
- Photocopy of the applicant's Qatar ID card
- (Non-Qatari applicants must provide a copy of their passport)
- Two recent passport sized photographs
- Application Fees: QR 350

Admission to the PhD of Science in Biological and Environmental Sciences program takes place in the fall semester only. For additional information on the program, please see our website at:

<http://www.qu.edu.qa/phdenvironmental/index.php>

### DEGREE REQUIREMENTS

A minimum of 75 credit hours are required to complete the PhD in Biological and Environmental Sciences program including the following:

- A minimum of 12 credit hours in Major Core Requirements
- A minimum of 45 credit hours in Thesis Requirements
- A minimum of 15 credit hours in Concentration Area Requirements
- A minimum of 3 credit hours in Major Electives
- Passing the comprehensive examination
- Passing the Candidacy Examination
- Passing the Dissertation Defense

### Major Core Requirements (12 CH)

- The following courses must be completed by all PhD in Biological and Environmental Sciences students:
- BIOL 600 Advanced Graduate seminar
- BIOL 601 Advanced Biostatistics
- BIOL 602 Lab Rotation I
- BIOL 603 Lab Rotation II

### Thesis Requirements (45 CH)

Students must complete 45 credit hours in the Thesis Requirements package:

- BIOL 699 PhD Thesis

### Concentration Area Requirements (15 CH)

Students must complete a minimum of 15 Credit Hours in one of the concentration areas offered by the program as detailed below.

### Concentration Area in Cell and Molecular Biology (15 CH)

Students must complete a minimum of 15 Credit Hours from the Cell and Molecular Biology concentration electives package as detailed below:

### Cell and Molecular Biology Concentration Electives (15 CH)

- BIOL 604 Advanced Molecular and Cell Biology
- BIOL 605 Advanced Toxicology
- BIOL 608 Advanced Biotechnology
- BIOL 609 Molecular Genetics
- BIOL 610 Epidemiology
- BIOL 614 Systems Physiology
- BIOL 615 Plant Physiology
- BIOL 617 Special Topic I
- BIOL 618 Special Topics II
- BIOL 619 Molecular Basis of Diseases
- BIOL 620 Bio-informatics

### Concentration Area in Environmental Sciences (15 CH)

Students must complete a minimum of 15 Credit Hours from the Environmental Sciences concentration electives package as detailed below.

### Environnemental Sciences Concentration Electives (15 CH)

Students must complete a minimum of 15 Credit Hours from the Environmental Sciences Concentration Electives package from the courses listed below:

- BIOL 605 Advanced Toxicology
- BIOL 606 Marine Sciences
- BIOL 607 Earth Systems
- BIOL 610 Epidemiology
- BIOL 611 Environmental Chemistry
- BIOL 612 Environmental Planning and Risk Management
- BIOL 613 Geospatial Methods
- BIOL 616 Bio-diversity
- BIOL 617 Special Topic I
- BIOL 618 Special Topics II
- BIOL 620 Bioinformatics

**Concentration Area in Ecosystems and Marine Sciences (15 CH)**

Students must complete a minimum of 15 Credit Hours from the Ecosystems and Marine Sciences concentration electives package as detailed below.

**Ecosystems and Marine Sciences Concentration Electives (15 CH)**

- BIOL 606 Marine Sciences
- BIOL 607 Earth Systems
- BIOL 609 Molecular Genetics
- BIOL 611 Environmental Chemistry
- BIOL 612 Environmental Planning and Risk Management
- BIOL 613 Geospatial Methods
- BIOL 614 Systems Physiology
- BIOL 616 Bio-diversity
- BIOL 617 Special Topic I
- BIOL 618 Special Topics II

**Concentration Area in Biotechnology (15 CH)**

Students must complete a minimum of 15 Credit Hours from the Biotechnology concentration electives package as detailed below.

**Biotechnology Concentration Electives (15 CH)**

- BIOL 604 Advanced Molecular and Cell Biology
- BIOL 606 Marine Sciences
- BIOL 608 Advanced Biotechnology
- BIOL 609 Molecular Genetics
- BIOL 615 Plant Physiology
- BIOL 616 Bio-diversity
- BIOL 617 Special topic I
- BIOL 618 Special topics II
- BIOL 619 Molecular Basis of Diseases
- BIOL 620 Bio-informatics

**Major Elective Requirements (3 CH)**

Students must complete a minimum of 3 Credit Hours in the major elective requirements package from the courses listed below:

- BIOL 604 Advanced Molecular and Cell Biology
- BIOL 605 Advanced Toxicology
- BIOL 606 Marine Sciences
- BIOL 607 Earth Systems
- BIOL 608 Advanced Biotechnology
- BIOL 609 Molecular Genetics
- BIOL 610 Epidemiology
- BIOL 611 Environmental Chemistry
- BIOL 612 Environmental Planning and Risk Management

- BIOL 613 Geospatial Methods
- BIOL 614 Systems Physiology
- BIOL 615 Plant Physiology
- BIOL 616 Bio-diversity
- BIOL 617 Special Topic I
- BIOL 618 Special Topics II
- BIOL 619 Molecular Basis of Diseases
- BIOL 620 Bio-informatics

**STUDY PLAN**

**PhD of Science in Biological and Environmental Sciences**

FIRST YEAR (24 credit hours)			
Term	Course #	Course Title	CH
Fall	BIOL 789	Advanced Graduate Seminar	3
	BIOL 701	Advanced Biostatistics	3
	BIOL 702	Lab Rotation I	3
		Elective course	3
Total			12
Spring	BIOL 703	Lab Rotation II	3
		Elective Course	3
		Elective Course	3
		Elective Course	3
		Comprehensive exam	0
Total			12

SECOND YEAR (18 credit hours)			
Term	Course #	Course Title	CH
Fall		Elective	3
		Elective	3

	BIOL 699	Thesis	3
Total			9
Spring	BIOL 699	Thesis	9
Total			9

THIRD YEAR (18 credit hours)			
Term	Course #	Course Title	CH
Fall	BIOL 699	Thesis	9
Total			9
Spring	BIOL 699	Thesis	9
Total			9

FOURTH YEAR (15 credit hours)			
Term	Course #	Course Title	CH
Fall	BIOL 699	Thesis	9
		Candidacy Exam	0
Total			9
Spring	BIOL 699	Thesis	9
Total			9

**PhD in Gulf Studies Program**

Main Men’s Building Room 112 (Men’s Section)

Phone: (974) 4403-4987

Email: [gulfstudiesprogram@qu.edu.qa](mailto:gulfstudiesprogram@qu.edu.qa)

Website: <http://www.qu.edu.qa/artsscience/departments/gulf%E2%80%93studies/PhD%E2%80%93Gulf-Studies>

**Director of the Gulf Studies Center**

Dr. Mahjoob Zweiri

**Program Coordinator**

Dr. Amr Al-Azm

**ABOUT THE PROGRAM**

The Gulf Studies PhD Program, launched in Fall 2015, offers students the opportunity to study the Gulf while living in the region itself, and it is the only PhD level program of its kind in the Middle East. The Program was developed in response to a growing need among stakeholders in the region for highly qualified graduates in the field of Gulf Studies as well as rapidly developing general interest and focus on the Gulf region.

The Program draws on an interdisciplinary curriculum to provide a holistic examination of the member states of the Gulf Cooperation Council (GCC) as well as Iran, Iraq, and Yemen. This includes topics within the areas of politics, economics, history, literature, international relations, security, the energy industry, ecology, and culture. Classes are taught by highly regarded expert faculty and academics, which specialize in Gulf Studies.

The PhD in Gulf Studies Program also helps connect students to assistantship opportunities on a competitive basis to gain work experience and offset tuition costs, preparing students to excel in their future professional and academic pursuits. The four-year program consists of evening classes taught in English and is well suited for working professionals.

**MISSION**

The Gulf Studies PhD Program aims to provide an advanced interdisciplinary understanding and in-depth knowledge of issues related to the contemporary states of the Gulf. The degree is designed towards providing students with transferable skills through cutting-edge coursework and the completion of an original research dissertation.

The Interdisciplinary curriculum, which is fully taught in English, provides an in-depth exploration of the region and includes the following specializations:

- Anthropology
- Literature and Sociolinguistics
- History and Politics
- Culture and Social Issues
- Politics and International Relations
- Defense and Security
- Environment
- Political economy and development studies
- Energy and natural resources
- Media and Information Communication



## PROGRAM OBJECTIVES

To address society's needs by developing human capacity equipped with a broad research-oriented training in the social sciences.

To advance students' progress on research and scholarship on the Gulf.

To advance students' analytical capabilities in history and in the social sciences and develop their appreciation of different approaches to the study of the polities, economies, societies and the modern history of the Gulf and the Middle East generally.

To enable students to engage in advanced study of socio-economic problems and policy issues pertaining to the Gulf region and the Middle East more generally.

To develop students' research abilities and their understanding of the relationship between conceptual tools, a theoretical framework and methodological approaches.

## LEARNING OUTCOMES

Conduct original research or other advanced scholarship for interpretation of new knowledge on the Gulf.

Apply major concepts and body of theoretical and conceptual knowledge related to their academic discipline or area of professional practice of Gulf Studies.

Design advanced research for academic enquiry.

Critically evaluate complex issues in their field and communicate their conclusions clearly and effectively to specialists and non-specialists.

## POTENTIAL CAREERS

The PhD in Gulf Studies Program offers a unique interdisciplinary study. It provides solid foundations for students who are interested in pursuing their careers in different sectors such as:

- Government,
- Academia and Education,
- Peace and Security,
- Media,
- Research centers and think-tanks
- Regional and international organizations,
- Civil societies, NGOs or non-profit sector

## ADMISSION REQUIREMENTS

All applicants to the PhD in Gulf Studies program who meet the following minimum requirements will be considered for admission to Qatar University:

- Successfully completed the two-year QU MA in Gulf Studies with a minimum cumulative GPA of 3.0 OR successfully completed a Master's degree in a related subject from a recognized university with a minimum cumulative GPA of 3.0 or its equivalent.
- Achieved a minimum score of 520 on the paper-based TOEFL or an ILETS score of 6 taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
- Submit test scores for the GRE exams taken within less than 2 years prior to the start of the intended semester of admission.
- A satisfactory performance in the personal interview with the Admission Committee

All applicants to the Doctor of Philosophy in Gulf Studies program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL or equivalent score report or other evidence of English proficiency in accordance with QU Policy.
- Statement of proposed thesis topic or general area of research (approximately 1500 words)
- Three letters of recommendation addressing the applicant academic achievement and/or professional accomplishments
- Curriculum Vitae (C.V.)
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application Fees.

## DEGREE REQUIREMENTS

A minimum of 60 credit hours are required to complete the PhD in Gulf Studies, including the following:

- 21 credit hours in Major Requirements
- 9 credit hours in major electives
- 30 credit hours in Thesis Requirements

- Passing the comprehensive examination
- Passing the Candidacy Examination
- Passing the Dissertation Defense

## Major Requirements (21 credit hours)

The following courses must be completed by all PhD in Gulf Studies students:

- GULF 600 Conceptual and Theoretical approaches to Gulf Studies
- GULF 601 Quantitative Research Methods in the Social Sciences
- GULF 602 Qualitative Research Methods in the Social Sciences
- GULF 611 Foreign Policy Analysis of the Gulf States
- GULF 612 Culture and Society in the Gulf
- GULF 614 Contemporary Issues in Gulf Studies
- GULF 615 Energy and Natural Resources in the Gulf

## Thesis Requirements (30CH)

The following course must be completed by all PhD in Gulf Studies students:

- GULF 690 Dissertation

## Major Electives (9 credit hours)

Student must complete 9 CH from courses listed in the following focus areas. The 9 CH may be taken from courses in different focus areas.

### The Social Issues Focus Area of the Major Electives Package

- GULF 623 Human Rights and the Gulf States
- GULF 624 Women and Gender issues in the Gulf
- GULF 625 Youth Issues in the Gulf
- GULF 629 Special Topics I

### The Energy and Economics Focus Area of the Major Electives Package

- GULF 633 Global Energy Geopolitics
- GULF 634 Food and Water Security in the GCC and Middle East
- GULF 635 GCC Economic Development and Diversification
- GULF 639 Special Topics II

## The Politics and International Relations Focus Area of the

### Major Electives Package

- GULF 643 Political Islam
- GULF 644 Politics and Society of Iran
- GULF 645 The Gulf and global powers
- GULF 646 Governance and Globalization in the Gulf
- GULF 649 Special Topics III

## STUDY PLAN

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	Gulf 600	Conceptual and Theoretical approaches to Gulf Studies	3
	Gulf 601	Quantitative Research Methods in the Social Sciences	3
	<b>Gulf 614</b>	Contemporary Issues in the Gulf	3
Total			9

SECOND SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	<b>Gulf 602</b>	Qualitative Research Methods in the Social Sciences	3
	<b>Gulf 611</b>	Foreign Policy Analysis of the Gulf States	3
	Gulf 615	Energy and Natural Resources in the Gulf	3
Total			9

THIRD SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs

Fall	Gulf 612	Culture and Society in the Gulf	3
	Gulf XXX	Elective 1	3
	Gulf XXX	Elective 2	3
		Comprehensive Exam	0
Total			9

FOURTH SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	GULF 690	Doctoral Thesis	6
	Gulf XXX	Elective 3	3
		Candidacy Exam	0
Total			9

FIFTH SEMETER (6 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GULF 690	Doctoral Thesis	6
Total			6

SIXTH SEMESTER (6 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	Gulf 690	Doctoral Thesis	6
Total			6

SEVENTH SEMESTER (6 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GULF 690	Doctoral Thesis	6
Total			6

EIGHTH SEMESTER (6 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	GULF 690	Doctoral Thesis	6
Total			6





## COLLEGE OF BUSINESS AND ECONOMICS

College of Business and Economics Building

Phone: (974) 4403 5000

Email: [cbegrad@qu.edu.qa](mailto:cbegrad@qu.edu.qa)

Website: <http://www.qu.edu.qa/business>

### Acting Dean of College of Business and Economics

Professor Adam Mohamed Ali Fadlalla

### Associate Dean for Academic Affairs

Professor Adam Mohamed Ali Fadlalla

### Associate Dean for Research and Graduate Studies

Professor Belaid Aouni

### ABOUT THE COLLEGE

The College of Business and Economics at Qatar University provides a high-quality, applied business education in a collegial, intellectually stimulating, and supportive learning and working environment. Guided by the university reform plan and committed to innovative curriculum and continuous improvement, the College offers undergraduate and graduate business programs that connect theory to practice, promote critical thinking, and engage students in active and collaborative learning.

### DEGREE OFFERINGS

Qatar University offers two types of Master's degrees: (1) A research-oriented degree culminating in a research-based experience typically in the form of a thesis and (2) a professional Master's degree, which is practical in nature and emphasizes professional knowledge beyond the baccalaureate degree.

The College of Business and Economics offers the following graduate degree programs:

- Master of Accounting (MAC)
- 4+1 Accounting Program ( MAC 4+1)
- Master of Business Administration (MBA)
- Master of Science in Marketing ( M. Sc. in Marketing)
- Master of Science in Finance ( M. Sc. in Finance)
- PhD in Business Administration (Accounting, Finance, Management, Marketing, Management Information Systems)

## Master of Accounting

College of Business and Economics

Department of Accounting and Information systems

Phone: (974) 4403 5013

Email: [cbegrad@qu.edu.qa](mailto:cbegrad@qu.edu.qa)

Website:

<http://www.qu.edu.qa/business/programs/graduates/mac.php>

### Program Coordinator

Mrs. Sawsan Elias El-Ghazal

### ABOUT THE PROGRAM

The Master of Accounting (MAC) is a highly specialized program in Accounting. It provides a state of the art applied education in managing accounting information with the scope to allow its holders to get access to upper management and financial positions in a wide variety of industries. The program offers two tracks: professional track and thesis track.

### OBJECTIVES

MAC has the following two educational objectives:

- Prepare graduate students with technical (quantitative and qualitative) and analytical skills and competencies in accounting; and,
- Develop effective and responsible accounting professionals.

### LEARNING OUTCOMES

Graduates of the Master of Accounting will be able to:

- Assess the ethical and regulatory environments for accountants;
- Apply analytical skills to accounting related problems;
- Assess and apply information technology to financial and non-financial information;
- Build appropriate research skills needed for accounting practice;
- Evaluate international accounting issues and practices, within a global context;

- Generate original research that contributes to expand the body knowledge in Accounting (Thesis track).

### OPPORTUNITIES

Accounting degree holders are in high demand both locally and internationally. Businesses, governmental agencies, and auditing companies are always looking for people with a strong background in accounting.

Opportunities for graduates exist in roles such as:

- Chief Accountants
- Chief Financial Officers
- External Auditors
- Internal Auditors
- Financial Managers
- Business Risk Managers
- Accounting Information Systems Specialists
- Business Consultants

In addition, graduates will have a strong background to start and run their own business.

### ADMISSION REQUIREMENTS

Students apply to the MAC program on specific dates assigned by the University. Incoming students must meet the following criteria:

- Complete a Bachelor's Degree in Accounting from an accredited university with a minimum Grade Point Average (GPA) of 2.80 on a 4.00 scale.
- Applicants are required to demonstrate their English proficiency as part of the admission process by meeting one of the following:
  - Earned a previous degree from an institution of higher education in a Program where English was the language of instruction.
  - Achieved a minimum score of 520 on the paper-based TOEFL, 190 computer based or 68 internet-based. Alternatively, the applicant achieved a minimum score of 6 or higher on IELTS Academic test. All these test scores must be within 2 years of the start of the intended semester of admission.
- A short essay stating the candidate objectives and interests in pursuing the MAC.
- A satisfactory performance in a personal interview with the program coordinator/faculty member.

All applicants to the Master of Business Administration program are required to submit the following documents

to the Admissions Department at Qatar University (all the documents must be uploaded electronically. The hard copies of the authenticated documents will be requested from the accepted candidates only):

- [Online Admissions Application](#)
- Final, official and certified university transcripts
- Official TOEFL score report or equivalent score report
- Evidence of work experience
- Two recommendation letters (Sample letter)
- Supporting statements (Sample Essays)
- Curriculum Vitae (C.V.)
- Health Certificate issued inside Qatar (International students please refer to [International Students Website](#))
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport; international students please refer to [International Students Website](#))
- Two (2) recent identical passport size [photographs](#) (size 4 x 6 cm) with white background
- [Application Fees](#)

Admission to the Master of Accounting program takes place in the fall semester only. For additional information on the program, please see our website at:

<http://www.qu.edu.qa/business/programs/graduates/mac>

### DEGREE REQUIREMENTS

#### Master of Accounting (Non-Thesis track)

A minimum of 30 credit hours are required to complete the Master of Accounting, including the following:

- 21 credit hours of major core courses
- 9 credit hours of major electives

Students need to successfully complete the following courses:

#### Major Requirements (21 credit hours)

- ACCT603 International Accounting
- ACCT 613 Accounting Research Methods
- ACCT 623 Advanced Cost /Managerial Accounting
- ACCT 643 Fraud Detection & Prevention
- ACCT 653 Advanced Accounting Information Systems
- MIST 613 Information Security
- ACCT 663 Business Information Consulting

**Major Electives (minimum of 9 credit hours)**

- ACCT 606 Corporate Governance
- ACCT 608 Commercial Law
- MAGT 611 Business Ethics & Legal Environment
- MIST 616 Enterprise Resource Planning
- ACCT 633 Governmental and nonprofit Accounting
- ACCT 612 Special Studies in Accounting

**STUDY PLAN (Non-Thesis Track)**

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	ACCT 603	International Accounting	3
	ACCT 613	Accounting Research Methods	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>
Spring	ACCT 623	Advanced Cost /Managerial Accounting	3
	ACCT 643	Fraud Detection and Prevention	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 12 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	ACCT 653	Advanced Accounting Information Systems	3
	MIST 613	Information Security	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>
Spring	ACCT 663	Business Information Consulting	3
<b>Total</b>			<b>3</b>

**Master of Accounting (Thesis track)**

**DEGREE REQUIREMENTS**

A minimum of 30 credit hours are required to complete the Master of Accounting, including the following:

- 18 credit hours of major core courses
- 6 credit hours of major electives
- 6 credit hours of thesis

Students need to successfully complete the following courses:

**Major Requirements (18 credit hours)**

- ACCT603 International Accounting
- ACCT 613 Accounting Research Methods
- ACCT 623 Advanced Cost /Managerial Accounting
- ACCT 643 Fraud Detection & Prevention
- ACCT 653 Advanced Accounting Information Systems
- MIST 613 Information Security

**Major Electives (minimum of 6 credit hours)**

- ACCT 606 Corporate Governance
- ACCT 608 Commercial Law
- MAGT 611 Business Ethics & Legal Environment
- MIST 616 Enterprise Resource Planning
- ACCT 633 Governmental and nonprofit Accounting
- ACCT 612 Special Studies in Accounting

**Thesis**

- ACCT 695: Thesis

**STUDY PLAN (Thesis Track)**

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	ACCT 603	International Accounting	3
	ACCT 613	Accounting Research Methods	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>
Spring	ACCT 623	Advanced Cost /Managerial Accounting	3
	ACCT 643	Fraud Detection and Prevention	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 12 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Spring	ACCT 663	Business Information Consulting	3

Fall	MIST 613	Information Security	3
	ACCT 695	Thesis	0
<b>Total</b>			<b>6</b>
Spring	ACCT 695	Thesis	6
<b>Total</b>			<b>6</b>

**4+1 Accounting Program**

The combined program provides an opportunity for high performing interested students enrolled in the Bachelor level program in accounting to complete the Bachelor Level and Master level programs in Accounting in a shorter period. Thus, no new degrees are awarded at the successful completion of this program but rather students will be awarded both existing BBA and MAC degrees.

The combined program requires the successful completion of 150 credit hours. A minimum of 30 Credit Hours are to be completed in Master level courses. Students are expected to complete the program degree requirements in five (5) academic years.

**ADMISSION REQUIREMENTS:**

Only students enrolled in the existing BBA in accounting program offered at the College of Business and Economics at QU are eligible to apply for the combined five year accounting program. Students enrolled in other majors are not eligible to apply for the program. Previously admitted students who were dropped from the program are also not eligible to re-apply again to the program .

In addition, students from other institutions are not eligible to apply for transfer admission into the combined program. These students may first apply for transfer admission in the BBA in accounting program and then apply to the combined five-year accounting program.

The Admission Committee at the Department of Accounting and Information Systems will carefully consider all aspects of an applicant’s academic background and aspirations in making its recommendations for admission.

Applicants must meet the following admission requirements:

1. Must be a QU full time undergraduate student majoring in accounting
2. Must have completed at least 75 credit hours at the time of application
3. Must have completed at least 90 credit hours to enroll in graduate courses
4. Must have completed the following courses at the time of starting the program:

- ACCT 221 Intermediate Accounting I
  - ACCT 222 Intermediate Accounting II
  - ACCT 331 Cost and Management Accounting
  - ACCT 333 Auditing I
5. Achieve a minimum cumulative GPA of 3.00 out of 4.0
  6. Students enrolled in the Arabic track of the Bachelor level accounting program and interested in the joining the combined program must show evidence of minimum proficiency in English (TOEFL computer based= 190 , IELTS = 6.0 or equivalent proficiency level)
  7. Filing the application form

**DEGREE REQUIREMENTS**

Students must fulfil the degree requirements related to professional/ thesis track.

The Department and the College is to work in close collaboration and coordination with the office of Admission and Registration at the Office of the VP for Student Affairs

**STUDY PLAN (Non-Thesis Track)**

FIRST YEAR ([ 30] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	ENGL 202	English I	3
	ARAB 100	Arabic Language	3
		Humanities /Fine Arts Package	3
		General skills package	3
	MATH 103	Natural Science	3
<b>Total</b>			<b>15</b>
Spring	ENGL 203	English II	3
	DAWA 111	Islamic	3
	ARAB 200	Arabic Language	3
	MATH 119	Business Math I	3
	MAGT 101	Principles of Management	3
<b>Total</b>			<b>15</b>

SECOND YEAR ([ 36 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall		General Knowledge Package	3
		Social/Behavioral Science Package	3
	STAT 220	Business Statistics I	3



	MAKT 101	Principles of Marketing	3
	ECON 111	Principles of Microeconomics	3
	ACCT 110	Financial Accounting	3
<b>Total</b>			<b>18</b>
Spring		Qatar and Gulf History Sub-Package	3
	MATH 221	Business Math II	3
	STAT 222	Business Statistics II	3
	ACCT 116	Managerial Accounting	3
	ECON 112	Principles of Macroeconomics	3
	FINA 201	Principles of Finance	3
<b>Total</b>			<b>18</b>

THIRD YEAR ([ 30 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MIST 201	Introduction to MIS	3
	LAWC 215	Business Law	3
	MAGT 304	Production and Operations Management	3
		Course from Major- UG	3
		Course from Major- UG	3
<b>Total</b>			<b>15</b>
Spring		Course from Minor-UG	3
		Course from Minor-UG	3
		Course from Major-UG	3
		Course from Major-UG	3
<b>Total</b>			<b>15</b>
Summer	MAGT 307	Internship Business	3
<b>Total</b>			<b>3</b>

FOURTH YEAR ([ 30 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAGT 405	Strategic Management	3
		Course from Major-UG	3
		Course from Major-UG	3
		Course from Minor-UG	3
	ACCT 613	Accounting Research Methods	3

<b>Total</b>			<b>15</b>
Spring		Course from Major-UG	3
		Course from Minor-UG	3
		Course from Minor-UG	3
	ACCT 623	Advanced Cost/Managerial Accounting	3
	ACCT 643	Fraud Detection and Prevention	3
<b>Total</b>			<b>15</b>

FIFTH YEAR ([ 21 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	ACCT 603	International Accounting	3
	ACCT 653	Advanced Accounting Information Systems	3
	MIST 613	Information Security	3
	XXXX XXX	Elective Course	3
	<b>Total</b>		
Spring	ACCT 663	Business Information Consulting	3
	XXXX XXX	Elective Course	3
	XXXX XXX	Elective Course	3
	<b>Total</b>		

#### STUDY PLAN (Thesis Track)

FIRST YEAR ([ 30 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	ENGL 202	English I	3
	ARAB 100	Arabic Language	3
		Humanities /Fine Arts Package	3
		General skills package	3
	MATH 103	Natural Science	3
	<b>Total</b>		
Spring	ENGL 203	English II	3
	DAWA 111	Islamic	3
	ARAB 200	Arabic Language	3
	MATH 119	Business Math I	3
	MAGT 101	Principles of Management	3

<b>Total</b>			<b>15</b>
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SECOND YEAR ([ 36 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall		General Knowledge Package	3
		Social/Behavioral Science Package	3
	STAT 220	Business Statistics I	3
	MAKT 101	Principles of Marketing	3
	ECON 111	Principles of Microeconomics	3
	ACCT 110	Financial Accounting	3
	<b>Total</b>		
Spring		Qatar and Gulf History Sub-Package	3
	MATH 221	Business Math II	3
	STAT 222	Business Statistics II	3
	ACCT 116	Managerial Accounting	3
	ECON 112	Principles of Macroeconomics	3
	FINA 201	Principles of Finance	3
<b>Total</b>			<b>18</b>

THIRD YEAR ([ 30 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MIST 201	Introduction to MIS	3
	LAWC 215	Business Law	3
	MAGT 304	Production and Operations Management	3
		Course from Major- UG	3
		Course from Major- UG	3
<b>Total</b>			<b>15</b>
Spring		Course from Minor-UG	3
		Course from Minor-UG	3
		Course from Major-UG	3
		Course from Major-UG	3
<b>Total</b>			<b>15</b>
Summer	MAGT 307	Internship Business	3
<b>Total</b>			<b>3</b>

FOURTH YEAR ([ 30 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAGT 405	Strategic Management	3
		Course from Major-UG	3
		Course from Major-UG	3
	ACCT 613	Accounting Research Methods	3
<b>Total</b>			<b>15</b>
Spring		Course from Major-UG	3
		Course from Minor-UG	3
		Course from Minor-UG	3
	ACCT 623	Advanced Cost/Managerial Accounting	3
	ACCT 643	Fraud Detection and Prevention	3
<b>Total</b>			<b>15</b>

FIFTH YEAR ([ 21 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	ACCT 603	International Accounting	3
	ACCT 653	Advanced Accounting Information Systems	3
	MIST 613	Information Security	3
<b>Total</b>			<b>9</b>
Spring	XXXX XXX	Elective Course	3
	XXXX XXX	Elective Course	3
	ACCT 695	Thesis	6
	<b>Total</b>		

## MASTER OF BUSINESS ADMINISTRATION

College of Business and Economics

Phone: (974) 4403-5013/ 5004

Email: [cbegrad@qu.edu.qa](mailto:cbegrad@qu.edu.qa)

Website:

<http://www.qu.edu.qa/business/programs/graduates/mba.php>

### Program Coordinator

Mrs. Sawsan Al Ghazal

### ABOUT THE PROGRAM

QATAR MBA Program develops leaders through a holistic approach that combines the academic foundation acquired in the business curriculum with a broad range of opportunities for personal maturation and professional growth. The MBA program is a general management degree. It is designed to provide a solid foundation for making business decisions, to develop skills in applying financial, marketing, management, information technology and statistical techniques to complex management problems, and to improve skills in effectively presenting and implementing solutions to business problems.

### EDUCATIONAL OBJECTIVES

The Master of Business Administration aims to:

- Develop skills in integrating business knowledge necessary to perform as management professionals in a globalized business environment;
- Prepare ethically and socially responsible business leaders; and
- Provide the necessary technical and analytical skills for effective decision-making.

### LEARNING OUTCOMES

Upon successful completion of the MBA program, students will be able to:

1. Demonstrate ethics in decision-making.
2. Demonstrate socially responsible decision-making.
3. Apply IT effectively in making business decisions.
4. Demonstrate leadership skills
5. Engage in the business community by tackling practical business challenges.
6. Integrate the functional areas knowledge in business decision-making
7. Use critical thinking in making business decisions
8. Identify and consider global issues in making Business decisions.

### OPPORTUNITIES

Graduates in Master of Business Administration are highly regarded business professionals and entrepreneurs. They find employment in public and private organizations and firms as executives, financial and management analysts, HR specialists, information technology officers, high-level government officers, among many other highly rewarding career opportunities. Our MBA alumni are very successful, many of whom are holding highest positions in their respective organizations are finding fulfillment in serving their ambitions and the State of Qatar.

### ADMISSION REQUIREMENTS

Students apply to the MBA program on specific dates assigned by the University. Incoming students must meet the following criteria:

1. Complete a Bachelor's Degree (undergraduate program of 4 years) or a higher degree from a college accredited by an equivalent authority in that country with a minimum Grade Point Average (GPA) of 2.80 on a 4.00 scale.
2. Applicants are required to demonstrate their English proficiency as part of the admission process by meeting one of the following:
  - Earned a previous degree from an institution of higher education in a program where English was the language of instruction.
  - Achieved a minimum score of 190 computer based or 68 internet-based. Alternatively, the applicant achieved a minimum score of 6 or higher on IELTS Academic test. All these test scores must be within 2 years of the start of the intended semester of admission.
3. A minimum of two-year work experience, after completing the Bachelor degree (undergraduate program of 4 years), is required. Additional experience will be recognized, and may help with admission to the program.
4. A satisfactory performance in a personal interview with the program coordinator/faculty member.
5. Writing a short essay during the personal interview.

All applicants to the Masters of Business Administration program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts
- Evidence of English Proficiency according to QU official Policy
- Evidence of work experience
- Two recommendation letters

- Supporting statements (Essays)
- Curriculum Vitae (C.V.)
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application Fee

Admission to the Master of Administration program takes place in the fall semester only. For additional information on the program, please see our website:

<http://www.qu.edu.qa/business/programs/graduates/mba>

### DEGREE REQUIREMENTS

#### Master of Business Administration

All MBA students must successfully complete a minimum of 36 credit hours in the following:

- 27 credit hours in Major Requirements
- 9 credit hours in Major Electives OR in Concentration

#### Area Requirements

Students holding a bachelor degree in a non-business related major must complete the Foundation Course Requirements package including 4 bridging courses with 12 credit hours (CH).

Students admitted into the program may select one of the two concentrations areas, Entrepreneurship or Business Analytics, offered by the program or select no concentration.

#### Major Requirements (27 CH)

- ACCT 602 Managerial Accounting for Decision Making
- ECON 602 Managerial Economics
- FINA 605 Corporate Finance
- MAGT 612 Business Research Methods
- MAGT 603 Operations Management
- MAGT 610 Strategic Management
- MAGT 615 Applied Graduation Project
- MAKT 604 Marketing Management
- MIST 606 Management Information Systems

#### Major Electives (9 CH)

Students who are not selecting one of the program offered concentration areas must complete 9 credit hours taken from the following courses:

- MAGT 602 Human Resources Management
- MAGT 604 Management of Change and Innovation

- MAGT 605 Project Management
- MAGT 607 International Business Management
- MAGT 609 Entrepreneurship & Small Business Management
- MAKT 605 Entrepreneurial Marketing
- FINA 607 Investment Analysis and Portfolio Management
- MIST 616 Enterprise Resources Planning
- MIST 660 Business Analytics
- MIST 670 Data Mining for Business

#### Concentration in Entrepreneurship Requirements

##### Package (9CH)

Students selecting the Entrepreneurship concentration area must complete the following courses

- MAGT 609 Entrepreneurship & Small Business Management
- MAGT 604 Management of Change and Innovation
- MAKT 605 Entrepreneurial Marketing

#### Concentration in Business Analytics Requirements

##### Package (9CH)

Students selecting the Business Analytics concentration area must complete the following courses:

- MIST 616 Enterprise Resources Planning
- MIST 660 Business Analytics
- MIST 670 Data Mining for Business

#### Bridging Courses Package (12 CH)

Students who hold a Bachelor Degree in disciplines other than Business are required to pass the following foundation courses prior to taking core/elective courses

- ACCT 501 Introduction to Accounting
- ECON 501 Introduction to Economics
- FINA 501 Introduction to Finance
- MAGT 501 Introduction to Management

### STUDY PLAN

#### Master of Business Administration

Students who hold a Bachelor's degree in Business



(Without Concentration)

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	FINA 605	Corporate Finance	3
	MIST 606	Management Information Systems	3
	MAGT 612	Business Research Methods	3
<b>Total</b>			<b>9</b>
Spring	MAKT 604	Marketing Management	3
	ACCT 602	Managerial Accounting for Decision Making	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAGT 603	Operations Management	3
	ECON 602	Managerial Economics	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>
Spring	MAGT 610	Strategic Management	3
	MAGT 615	Applied Graduation Project	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>

**STUDY PLAN**

**Master of Business Administration**

Students who hold a Bachelor's degree in disciplines other than Business (Without Concentration)

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAGT 501	Introduction to Management	3
	FINA 501	Introduction to Finance	3
	ACCT 501	Introduction to Accounting	3
<b>Total</b>			<b>9</b>

Spring	ECON 501	Introduction to Economics	3
	ACCT 602	Managerial Accounting for Decision Making	3
	MAKT 604	Marketing Management	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 15 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	FINA 605	Corporate Finance	3
	MIST 606	Management Information Systems	3
	MAGT 612	Business Research Methods	3
<b>Total</b>			<b>9</b>
Spring	MAGT 610	Strategic Management	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>6</b>

THIRD YEAR ([ 15 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAGT 603	Operations Management	3
	ECON 602	Managerial Economics	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>
Spring	MAGT 615	Applied Graduation Project	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>6</b>

**STUDY PLAN**

**Master of Business Administration**

Students who hold a Bachelor's degree in Business (Entrepreneurship Concentration)

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	FINA 605	Corporate Finance	3
	MIST 606	Management Information Systems	3

	MAGT 612	Business Research Methods	3
<b>Total</b>			<b>9</b>
Spring	MAKT 604	Marketing Management	3
	ACCT 602	Managerial Accounting for decision Making	3
	MAGT 604	Managements of Change and Innovation	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAGT 603	Operations Management	3
	ECON 602	Managerial Economics	3
	MAGT 609	Entrepreneurship & Small Business	3
<b>Total</b>			<b>9</b>
Spring	MAGT 615	Applied Graduation Project	3
	MAGT 610	Strategic Management	3
	MAKT 605	Entrepreneurial Marketing	3
<b>Total</b>			<b>9</b>

**STUDY PLAN**

**Master of Business Administration**

Students who hold a Bachelor's degree in Business (Business Analytics Concentration)

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	FINA 605	Corporate Finance	3
	MIST 606	Management Information Systems	3
	MAGT 612	Business Research Methods	3
<b>Total</b>			<b>9</b>
Spring	MAKT 604	Marketing Management	3
	ACCT 602	Managerial Accounting for Decision Making	3
	MIST 660	Business Analytics	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAGT 603	Operations Management	3
	ECON 602	Managerial Economics	3
	MIST 616	Entrepreneurship and Small Business	3
<b>Total</b>			<b>9</b>
Spring	MAGT 610	Strategic Management	3
	MIST 670	Data Mining for Business	3
	MAGT 615	Applied Graduation Project	3
<b>Total</b>			<b>9</b>

**STUDY PLAN**

**Master of Business Administration**

Students who hold a Bachelor's degree in disciplines other than Business (Entrepreneurship Concentration)

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAGT 501	Introduction to Management	3
	FINA 501	Introduction to Finance	3
	ACCT 501	Introduction to Accounting	3
<b>Total</b>			<b>9</b>
Spring	ECON 501	Introduction to Economics	3
	ACCT 602	Managerial Accounting for Decision Making	3
	MAKT 604	Marketing Management	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 15 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	FINA 605	Corporate Finance	3
	MAGT 603	Operations Management	3
	MAGT 612	Business Research Methods	3
<b>Total</b>			<b>9</b>

Spring	MAGT 610	Strategic Management	3
	MAGT 604	Management of Change and Innovation	3
<b>Total</b>			<b>6</b>

	MAGT 612	Business Research Methods	3
<b>Total</b>			<b>9</b>
Spring	MIST 670	Data Mining for Business	3
	MIST 660	Business Analytics	3
<b>Total</b>			<b>6</b>

THIRD YEAR ([ 15 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MIST 606	Management Information Systems	3
	ECON 602	Managerial Economics	3
	MAGT 609	Entrepreneurship and Small Business	3
<b>Total</b>			<b>9</b>
Spring	MAGT 615	Applied Graduation Project	3
	MAGT 610	Strategic Management	3
<b>Total</b>			<b>6</b>

THIRD YEAR ([ 15 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MIST 606	Management Information Systems	3
	ECON 602	Managerial Economics	3
	MIST 616	Entrepreneurship and Small Business	3
<b>Total</b>			<b>9</b>
Spring	MAGT 615	Applied Graduation Project	3
	MAGT 610	Strategic Management	3
<b>Total</b>			<b>6</b>

## STUDY PLAN

### Master of Business Administration

Students who hold a Bachelor's degree in disciplines other than Business (Business Analytics Concentration)

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAGT 501	Introduction to Management	3
	FINA 501	Introduction to Finance	3
	ACCT 501	Introduction to Accounting	3
<b>Total</b>			<b>9</b>
Spring	ECON 501	Introduction to Economics	3
	ACCT 602	Managerial Accounting for Decision Making	3
	MAKT 604	Marketing Management	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 15 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	FINA 605	Corporate Finance	3
	MAGT 603	Operations Management	3

## Master of Science in Marketing

College of Business and Economics

Phone: (974) 4403-5013

Email: [cbegrad@qu.edu.qa](mailto:cbegrad@qu.edu.qa)

Website:

<http://www.qu.edu.qa/business/programs/graduates/msc-marketing>

### Program Coordinator

Mrs. Sawsan Al Ghazal

### ABOUT THE PROGRAM

The Master of Science in Marketing (M.Sc. MAKT) program is designed in light of the changing roles and tasks of marketing professionals in today's dynamic environment. It aims to provide students with an advanced theoretical foundation in marketing as well as build deep competencies in the field. Students will gain a proficiency in the latest methods and concepts for understanding consumer behavior, analyzing and interpreting marketing data, and devising effective marketing strategies. The program offers two different tracks: a research track (thesis option) and a professional track (project option). The research track aims at developing and enhancing the research skills of students through coursework as well as completing a research thesis. On the other hand, the non-thesis track focuses on equipping students with more practical skills

to operate the marketing function of a wide range of organizations across multiple industries.

### EDUCATIONAL OBJECTIVES

#### Objective 1: Marketing Concepts and Strategies

Students who earn the M.Sc. MAKT degree will demonstrate a firm grasp of modern marketing concepts and strategies in global business environments.

#### Objective2: Effective Communication

Students who earn the M.Sc. MAKT degree will demonstrate an ability to effectively express ideas and facts in a variety of oral, written and visual communications.

#### Objective3: Critical Analysis and Problem Solving

Students who earn the M.Sc. MAKT degree will be able to identify, integrate and apply the appropriate tools and techniques of marketing to critically understand, analyze and solve complex marketing problems and make ethical marketing decisions.

#### Objective 4: Professional Skills and Personal Development.

Students who earn the M.Sc. MAKT will demonstrate a range of skill-set expected from a marketing expert and demanded by companies for lifelong career success in marketing. These skills will help to interpret and apply sophisticated research literature and knowledge in real-life situations and for solving practical problems.

### LEARNING OUTCOMES:

Upon successful completion of the M.Sc. Marketing, students will be able to:

1. Demonstrate the understanding of marketing concepts and their application in real business situations.
2. Analyze various marketing strategies and identify the best marketing strategy for a firm.
3. Identify and utilize appropriate methodological tools for marketing research.
4. Utilize analytical and critical skills in making informed marketing decisions
5. Describe the concepts of ethics and explain its relevance in modern day marketing.
6. Write effectively and present their marketing plans, projects and other course requirements.
7. Conduct and write a publishable quality research thesis (only for Thesis Track)

### ADMISSION REQUIREMENTS:

All applicants to the Master of Science in Marketing program must meet the admission requirements to Master programs as

stipulated by the QU Admission Policy as well as the following requirements to be considered for admission to Qatar University:

1. Completed a Bachelor Degree or a higher-level degree with a minimum cumulative GPA of 2.80 out of 4.0 or its equivalent from a higher education institution accredited by an international accrediting association or by the Ministry of Higher Education or equivalent authority in the country where the institution is affiliated.
2. Achieved a minimum score of 190 computer based or 68 internet-based. Alternatively, the applicant achieved a minimum score of 6 or higher on IELTS Academic test. All these test scores must be within 2 years of the start of the intended semester of admission or earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction. Applicants are encouraged to submit standardized test scores, where available, in support of their application.
3. Demonstrate a satisfactory performance in a personal interview.
4. Demonstrate a satisfactory performance in writing a short essay during the personal interview.

All applicants to the Master of Science in Marketing program are required to submit the following documents to the Admissions Department at Qatar University (all the documents must be uploaded electronically. The hard copies of the authenticated documents will be requested from the accepted candidates only)

- Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL score report or equivalent score report or other evidence of English proficiency in accordance with QU Policy
- Two confidential recommendation letters from faculty or employers
- Curriculum Vitae (C.V.) with personal statement
- Health Certificate issued inside Qatar (International students please refer to International Students Website)
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport; international students please refer to International Students website)
- Two (2) recent identical passport size photographs (size 4 x 6 cm) with white background
- Application Fees
-



## DEGREE REQUIREMENTS

A minimum of 30 credit hours are required to complete the Master of Science in Marketing including the following:

- A minimum of 12 credit hours in the Major Requirements package
- A minimum of 9 credit hours from the Major Electives package
- A minimum of 9 credit hours in requirements for Thesis or Project Option as detailed below:

Project Option:

- A minimum of additional 3 credit hours from the Marketing Electives sub-package
- A minimum of 6 credit hours in the Project Requirements package

Thesis Option:

- A minimum of 9 credit hours in the Thesis Requirements package

### Thesis Requirements Package (9 CH)

Students admitted in the research track must complete 9 CH from the Thesis Requirements package by completing the courses listed below:

- MAKT 614 Marketing Research
- MAKT 690 Thesis

### Major Requirements Package (12 CH)

Student must complete 12 CH from the following courses:

- MAKT 600 Consumer Behavior
- MAKT 604 Marketing Management
- MAKT 609 Marketing Strategy
- MAGT 612 Business Research Methods

### Major Electives Package (9 CH)

Students must complete a minimum of 9 credit hours from courses in the Major Electives package by completing a minimum of 6 credit hours from courses listed in the Marketing Electives sub-package and a maximum of 3 credit hours from courses listed in the Management Electives package.

### Marketing Electives Sub-Package (6 - 9 CH)

Students must complete a minimum of 6 credit hours from courses listed in the Marketing Electives sub-package

- MAKT 602 Fundamentals of Sports Marketing

- MAKT 603 Events marketing
- MAKT 605 Entrepreneurial Marketing
- MAKT 606 Advances in Sports Marketing
- MAKT 607 Islamic Marketing and Branding
- MAKT 608 Special Topics in Marketing

### Management Electives Sub-Package (0 - 3 CH)

Students must complete a maximum of 3 credit hours from courses listed in the Management Electives package

- MAGT 604 Management for Change and Innovation
- MAGT 607 International Business Management
- MAGT 609 Entrepreneurship & Small Business Management

### Project Requirements Package (6 CH)

Students admitted in the professional track must complete 6 CH from the Project Requirements package by completing the courses listed below:

- MAKT 601 Integrated Marketing Communication
- MAKT 680 Marketing Consulting Project

### STUDY PLAN (Thesis Track-Project)

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAKT 600	Consumer Behavior	3
	MAKT 604	Marketing Management	3
	MAGT 612	Business Research Methods	3
<b>Total</b>			<b>9</b>
Spring	MAKT 609	Marketing Strategy	3
	MAKT 601	Integrated marketing Communication	3
	MAKT XXX	Elective Course	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 12] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAKT XXX	Elective Course	3
	MAKT	Elective Course	3

	XXX		
<b>Total</b>			<b>6</b>
Spring	MAKT 690	Thesis*	6
<b>Total</b>			<b>6</b>

\*Thesis credits can be distributed as needed within the Fall and spring semesters of year 2.

### STUDY PLAN (Non-Thesis Track-Project)

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAKT 600	Consumer Behavior	3
	MAKT 604	Marketing Management	3
	MAGT 612	Business Research Methods	3
<b>Total</b>			<b>9</b>
Spring	MAKT 609	Marketing Strategy	3
	MAKT 601	Integrated marketing Communication	3
	MAKT XXX	Elective Course	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 12] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	MAKT XXX	Elective Course	3
	MAKT XXX	Elective Course	3
<b>Total</b>			<b>6</b>
Spring	MAKT XXX	Elective Course	3
	MAKT 680	Marketing Consulting Project	3
<b>Total</b>			<b>6</b>

## Master of Science in Finance

College of Business and Economics

Phone: (974) 4403-5013

Email: [cbegrad@qu.edu.qa](mailto:cbegrad@qu.edu.qa)

Website:

<http://www.qu.edu.qa/business/programs/graduates/Master-of-Science-in-Finance>

### Program Coordinator

Mrs. Sawsan Al Ghazal

### ABOUT THE PROGRAM

The Master of Science (M.Sc.) in Finance program aims to produce highly qualified professionals and researchers by preparing them to assume senior managerial and leadership positions in various areas related to finance. The M.Sc. in Finance program is AACSB accredited. The program strives to equip graduates with the knowledge and skills they need to significantly make a difference in Qatar and the world. The program also aims to prepare students for the pursuit of an advanced research degree in Finance.

### EDUCATIONAL OBJECTIVES

The M.Sc. in Finance program has the following objectives:

1. Finance Knowledge: Graduates will demonstrate a thorough understanding of various aspects of finance including corporate finance, investments, risk management, Islamic finance, Energy finance, etc. Students are also introduced to the latest advances in the field of Finance and to the dynamic financial needs and challenges in the region and abroad.
2. Critical Thinking and Problem Solving: Given the quantitative nature of the finance field, students should be able to measure the financial performance of firms using different tools and techniques, build a critical analysis of the performance, and acquire skills needed to suggest and implement potential solutions. Students should then evaluate the soundness of their actions.
3. Research Capabilities: Students who enroll in the thesis track are expected to write a high quality thesis reflecting the level of knowledge acquired in the program and to develop skills to conduct research in fields related to finance using econometric/statistical software. The Graduation Project for non-thesis students shall also reflect high level of consultancy capabilities in applied research within Qatari firms.
4. Ethics Awareness: Students are expected to be sensitive to ethical issues in finance since value creation may conflict with ethical considerations. Students will develop awareness of the impact of their financial decisions on the firm and on the larger community.

## LEARNING OUTCOMES:

Upon successful completion of the M.Sc. Finance, students will be able to:

1. Incorporate advanced financial knowledge in contemporary and unacquainted circumstances.
2. Assess the ethical and regulatory environment for financiers.
3. Demonstrate advanced numeracy and quantitative skills
4. Apply analytical and critical thinking skills to finance related problems.
5. Conduct and write a publishable quality research thesis (thesis-track) or reports on graduation projects (non-thesis track).

## ADMISSION REQUIREMENTS

All applicants to the Master of Science in Finance program must meet the admission requirements to Master programs as stipulated by the QU Admission Policy as well as the following requirements to be considered for admission to Qatar University:

1. Completed a Bachelor Degree or a higher-level degree with a minimum cumulative GPA of 2.80 out of 4.0 or its equivalent from a higher education institution accredited by an international accrediting association or by the Ministry of Higher Education or equivalent authority in the country where the institution is affiliated.
2. Achieved a minimum score of 190 computer based or 68 internet-based. Alternatively, the applicant achieved a minimum score of 6 or higher on IELTS Academic test. All these test scores must be within 2 years of the start of the intended semester of admission or earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction. Applicants are encouraged to submit standardized test scores, where available, in support of their application.
3. Demonstrate a satisfactory performance in a personal interview.
4. Demonstrate a satisfactory performance in writing a short essay during the personal interview.

All applicants to the Master of Science in Finance program are required to submit the following documents to the Admissions Department at Qatar University (all the documents must be uploaded electronically. The hard copies of the authenticated

documents will be requested from the accepted candidates only):

- Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL score report or equivalent score report or other evidence of English proficiency in accordance with QU Policy
- Two confidential recommendation letters from faculty or employers
- Curriculum Vitae (C.V.) with personal statement
- Health Certificate issued inside Qatar (International students please refer to International Students Website)
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport; international students please refer to International Students Website)
- Two (2) recent identical passport size photographs (size 4 x 6 cm) with white background
- Application Fees

## DEGREE REQUIREMENTS

Thirty-six (36) credit hours are required to complete the Master of Science in Finance including the following:

### Thesis Track:

- Twenty-seven (27) credit hours in the Major Requirements package, including six (6) credit hours for the thesis.
- Nine (9) credit hours from the Major Electives package.

### Non-Thesis Track:

- Twenty-seven (27) credit hours in the Major Requirements package, including three (3) credit hours for the graduation project.
- Nine (9) credit hours from the Major Electives package.

### Major Requirements Package for Thesis Track (27 credit hours including the 6 credit hours for the thesis)

- FINA 605 Corporate Finance
- FINA 607 Investment Analysis and Portfolio Management
- FINA 610 Derivatives and Financial Engineering
- FINA 608 Financial Analysis and Valuation
- FINA 613 Research Methods in Finance
- FINA 617 Financial Econometrics I
- FINA 619 Financial Econometrics II
- FINA 699 Thesis in Finance
- FINA 695 Thesis Defense

### Major Requirements Package for Non-Thesis Track (27 credit hours including the 3 credit hours for the graduation project):

- FINA 605 Corporate Finance
- FINA 607 Investment Analysis and Portfolio Management
- FINA 610 Derivatives and Financial Engineering
- FINA 608 Financial Analysis and Valuation
- FINA 613 Research Methods in Finance
- FINA 617 Financial Econometrics I
- FINA 619 Financial Econometrics II
- MIST 660 Business Analytics
- FINA 698 Finance Graduation Project

### Major Elective Package for Non-Thesis Track (9 credit hours)

- FINA 615 Advanced Islamic Banking and Finance
- FINA 620 Islamic Capital Markets and Institutions
- FINA 625 Special Topics in Islamic Finance
- FINA 628 Risk Management in Islamic Finance
- FINA 630 Energy Financial Economics
- FINA 633 Energy Risk Management
- FINA 691 Energy Finance Practicum
- FINA 692 Special topics in Energy Finance
- ACCT 604 Energy Financial Accounting

## STUDY PLAN (Thesis Track-Project)

SECOND YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	FINA 619	Financial Econometrics II	3
	XXXX XXX	Elective Course	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>
Spring	XXXX XXX	Elective Course	3
	FINA 699	Thesis	6
	FINA 695	Thesis Defense	0
<b>Total</b>			<b>9</b>

## STUDY PLAN (Non-Thesis Track-Project)

FIRST YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	FINA 605	Corporate Finance	3
	FINA 607	Investment Analysis and Portfolio Management	3
	FINA 613	Research Methods in Finance	3
<b>Total</b>			<b>9</b>
Spring	FINA 608	Financial Analysis and Valuation	3
	FINA 610	Derivatives and Financial Engineering	3
	FINA 617	Financial Econometrics I	3
<b>Total</b>			<b>9</b>

SECOND YEAR ([ 18 ] credit hours)			
Term	Course #	Course Title	Cr Hr.
Fall	FINA 619	Financial Econometrics II	3
	XXXX XXX	Elective Course	3
	XXXX XXX	Elective Course	3
<b>Total</b>			<b>9</b>
Spring	MIST 660	Business Analytics	3
	XXXX XXX	Elective Course	3
	FINA 698	Finance Graduation Project	3
<b>Total</b>			<b>9</b>



## PhD in Business Administration

College of Business and Economics

Office of Research and Graduate Studies

Phone: (974) 4403-5013

Email: cbegrad@qu.edu.qa

Website:

<http://www.qu.edu.qa/business/programs/graduates/phd-business>

### Program Coordinator

Mrs. Sawsan Al Ghazal

### ABOUT THE PROGRAM

The PhD in Business Administration is a highly specialized program, which will prepare educators, business researchers, and professional contributors to the society who are empowered with the latest knowledge, skills and tools. The program achieves its objectives through rigorous teaching and research that contribute to the advancement of knowledge and practice.

### OBJECTIVES

- The educational objectives for this program are as follows:
- Prepare students to become highly qualified research scholars
- Prepare students to excel at knowledge creation and knowledge dissemination in their chosen field of study
- Provide students with a spirit of inquiry and lifelong learning.

### LEARNING OUTCOMES

1. Demonstrate integrity and commitment to ethics in conducting research.
2. Critique and validate research literature in a particular discipline.
3. Pursue original research that advances the body of knowledge in each area of specialization.
4. Demonstrate proficiency in articulating research ideas in writing.

### OPPORTUNITIES

The PhD degree holders will have opportunities to join educational institutions, research centers and high ranked positions within different organizations.

### ADMISSION REQUIREMENTS

Applications are considered for Fall semester admission only. The application deadline is available in Qatar University Application Timeline. For full consideration, all materials must be uploaded through Qatar University website by the specified deadline. All applicants to the Ph.D. degree in Business Administration program who meet the following minimum criteria will be considered for admission to the College of Business and Economics (Qatar University):

- Completed a Master's degree in Business Administration or in Business related field (\*see remark below) from a university accredited by an international accrediting association or by the Ministry of Higher Education or equivalent authority in that country with a minimum Grade Point Average (GPA) of 3 over 4.
- An acceptable score on the Graduate Management Admissions Test (GMAT) is required. In some cases, scores from the Graduate Records Examination (GRE) may be substituted. The minimum score will be determined based on the pool of applicants. The test has to be taken within 2 years prior to the start of the intended semester of admission.
- Achieved a minimum score of 550 on the paper-based TOEFL or a minimum score of 6 in IELTS test taken within 2 years of the start of the intended semester of admission, or earned a previous degree from an accredited institution of higher education in a program where English was the language of instruction.
- A satisfactory performance in the personal interview.
- Submit a statement of purpose a document of 10 to 12 pages describing the research question to be tackled by the candidate. The documents should include an introduction, literature review, research question, research methodology and references.
- Make a presentation of the research question during the personal interview in the front of the selection committee.

These admission criteria are in concordance with Qatar University Policies related to Graduate Studies

All applicants to the PhD degree in Business Administration program are required to submit the following documents:

- Complete Online Admission Application,
- Final, official and certified university transcripts,
- Statement of Purpose (10 to 12 pages) highlighting the research question to be tackled in their doctoral studies.
- Evidence of English Proficiency according to QU Policy,
- Official GMAT score report.
- Three recommendation letters.

- Curriculum Vitae.
- Health Certificate.
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport).
- Two recent identical passport-size photographs with white background.
- Application Fee.

Admission to the PhD in Business Administration program takes place in the fall semester only. For additional information on the program, please visit our website at: <http://www.qu.edu.qa/business/programs/graduates/phd-business>

The Program offers specialization in Accounting, Finance, Management Information Systems, Management and Marketing.

### DEGREE REQUIREMENTS

#### PHD in Business Administration

Students enrolled in the CBE offered Ph.D. program must successfully complete the degree requirements as stipulated by Qatar University policy including:

1. Successfully completed a minimum of 30 credit hours of course work as described in the Ph.D. program curriculum with a minimum cumulative GPA of 3.0 on a scale of 4.0.
2. Pass the comprehensive exam in the specialization field of study no later than the third semester after enrollment.
3. Pass the candidacy examination no later than the fourth semester after enrollment.
4. Successfully defend a dissertation in field of study.
5. Publish (or receive acceptance for publication) at least two research papers in a peer reviewed journal.

The journals must meet at least one of the following criteria:

1. ISI impact factor of at least 1,
2. Listed in SCOPUS,
3. Listed in ABDC, with a ranking of "B" or better,
4. Listed in Association of Business Schools' Academic Journal Guide with a ranking of 2 or better.

The paid journals (journals that require publication fees) cannot be counted for the publication requirement for the CBE Ph.D. program. Please consult with your supervisor before submitting your research work for publication.

Students admitted to the PhD in Business Administration program must complete the following package requirements:

#### College Core Requirements (15 Credit Hours)

Student must complete the following courses:

- BUAD 800 Epistemology
- BUAD 801 Research Methodology
- BUAD 802 Doctoral Research Seminar
- BUAD 803 Parametric Analysis
- BUAD 804 Non-Parametric Analysis
- BUAD 810 Graduate Seminar (0CH)

#### Dissertation Courses (30 Credit Hours)

Student must complete 30 CH from the following courses:

- BUAD 890 Doctoral Dissertation

#### Specialization Area Requirements (15 CH)

Students must complete a minimum of 15 Credit Hours in one of the specialization areas offered by the program as detailed below.

##### Specialization Area in Accounting (15 CH)

Students selecting the Specialization Area in Accounting must complete a minimum of 9 Credit Hours from the Accounting Requirements Package and 6 Credit Hours from the Accounting Electives Package as detailed below:

##### Accounting Requirements Package (9 CH)

Students selecting the Accounting Specialization Area must complete the following required courses:

- ACCT 800 Analytical and Empirical Research in Financial Accounting and Reporting
- ACCT 801 Contemporary Issues in Management Accounting
- ACCT 802 Doctoral Seminar in Accounting Theory

##### Accounting Electives Package (6 CH):

Students selecting the Accounting Specialization Area must complete 6 CH from the following courses:

- ACCT 803 Issues in Auditing and Assurance
- ACCT 804 Contemporary Accounting Information Systems Issues
- ACCT 805 Corporate Governance and Accounting Ethics
- ACCT 806 Special Topics in Accounting Research

##### Specialization Area in Finance (15 CH)

Students selecting the Specialization Area in Finance must complete a minimum of 9 Credit Hours from the Finance Requirement Package and 6 Credit Hours from the Finance Electives Package as detailed below:

**Finance Requirements Package (9 CH)**

Students selecting the Finance Specialization Area must complete the following required courses:

- FINA 800 Theory of Finance
- FINA 801 Empirical Methods in Finance
- FINA 802 Current Issues in Finance

**Finance Electives Package (6 CH)**

Students selecting the Finance Specialization Area must complete 6 CH from the following courses:

- FINA 803 Fixed Income Securities
- FINA 804 Financial Markets and Institutions
- FINA 805 Financial Risk Management
- FINA 806 Islamic Banking and Finance
- ECON 800 Advanced Microeconomics
- ECON 801 Applied Econometrics

**Specialization Area in Management Information Systems (15 CH)**

Students selecting the Specialization Area in Management Information Systems must complete a minimum of 9 Credit Hours from the MIS Requirements Package and 6 Credit Hours from the MIS Electives Package as detailed below:

**MIS Requirements Package (9 CH)**

Students selecting the MIS Specialization Area must complete the following required courses: MIST 800 Foundations of Information Systems Research

- MIST 801 Doctoral Seminar in Information Systems
- MIST 802 Information Systems Pedagogy

**MIS Electives Package (6 CH)**

Students selecting the MIS Specialization Area must complete 6 CH from the following courses:

- MIST 803 Data Analytics
- MIST 804 Information Privacy and Security
- MIST 805 Open Innovations in Information Systems
- MIST 806 Special in Information Systems Research
- MIST 807 Directed Research in Information Systems

**Specialization Area in Management (15 CH)**

Students selecting the Specialization Area in Management must complete a minimum of 9 Credit Hours from the Management Requirements Package and 6 Credit Hours from the Management Electives Package as detailed below:

**Management Requirements package (9 CH)**

Students selecting the Management Specialization Area must complete the following required courses:

- MAGT 800 Management Theory
- MAGT 801 Advanced Strategic Management
- MAGT 802 Organization Behavior and Organization Theory

**STUDY PLAN**

**Management Electives Package (6 CH)**

Students selecting the Management Specialization Area must complete 6 CH from the following courses:

- MAGT 803 Supply Chain Management
- MAGT 804 Business, Government and Society
- MAGT 805 Managerial Decision Making
- MAGT 806 Special Topics in Management Research for Qatar and GCC

**Specialization Area in Marketing (15 CH)**

Students selecting the Specialization Area in Marketing must complete a minimum of 9 Credit Hours from the Marketing Requirements Package and 6 Credit Hours from the Marketing Electives Package as detailed below:

**Marketing Requirements Package (9CH)**

Students selecting the Marketing Specialization Area must complete the following required courses:

- MAKT 800 Marketing Theory
- MAKT 801 Strategic Marketing
- MAKT 802 Consumer Behavior

**Marketing Electives Package (6 CH)**

Students selecting the Marketing Specialization Area must complete 6 CH from the following courses:

- MAKT 803 Brand Management
- MAKT 804 Leadership and Communication
- MAKT 805 Special Topics in Marketing
- MAKT 806 Qualitative Marketing Research

**ADDITIONAL REQUIREMENTS**

**Bridging Courses for Non-Business applicants (12 CH)**

Students who hold a Master degree in disciplines other than Business must successfully complete 9 credit hours of Business foundation courses. Admission to the Ph.D program will be conditional on getting a minimum grade of 'B' in each

foundation course. The four foundation courses are listed below:

- MAGT 501 Introduction to Management
- ACCT 501 Introduction to Accounting
- FINA 501 Introduction to Finance
- ECON 501 Introduction to Economics

Ph.D. in Business Administration		
Fall Semester Year 1 [ 9 credit hours]		
Course #	Course Title	Credit Hours
BUAD 800	Epistemology	3
BUAD 801	Research Methodology	3
XXXX XXX	Required Course from Specialization	3
Spring Semester Year 1 [ 9 credit hours]		
Course #	Course Title	Credit Hours
BUAD 802	Doctoral Research Seminar	3
BUAD 803	Parametric Analysis	3
XXXX XXX	Required Course from Specialization	3
	Comprehensive Exam: 1st tentative	0
Fall Semester Year 2 [ 9 credit hours]		
Course #	Course Title	Credit Hours
BUAD 804	Non-Parametric Analysis	3
XXXX XXX	Required Course from Specialization	3
XXXX XXX	Elective Course in Management	3
	Comprehensive Exam: 2nd tentative	0
	Candidacy Exam: 1st tentative	0
Spring Semester Year 2 [ 9 credit hours]		
Course #	Course Title	Credit Hours
XXXX XXX	Elective Course in Management	3
BUAD 810	Graduate Seminar	0
BUAD 890	Dissertation	6

	Candidacy Exam: 2nd tentative	0
Fall Semester Year 3 [ 6 credit hours]		
Course #	Course Title	Credit Hours
BUAD 890	Dissertation	6
Spring Semester Year 3 [ 6 credit hours]		
Course #	Course Title	Credit Hours
BUAD 810	Graduate Seminar	0
BUAD 890	Dissertation	6
Fall Semester Year 4 [ 6 credit hours]		
Course #	Course Title	Credit Hours
BUAD 890	Doctoral Dissertation	6
Spring Semester Year 4 [ 6 credit hours]		
Course #	Course Title	Credit Hours
BUAD 810	Graduate Seminar	0
BUAD 890	Dissertation	6
	Dissertation Defense	0



## COLLEGE OF EDUCATION

College of Education Building

Phone: (974) 4403-

Email: [Dean-Edu@qu.edu.qa](mailto:Dean-Edu@qu.edu.qa)

Website: <http://www.qu.edu.qa/education/>

### Dean

Ahmed Al Emadi

### Associate Dean for Research & Graduate Studies

Ahmed Megreya

### Acting Associate Dean for Academic Affairs

Hessa AL-Thani

### Assistant Dean for Student Affairs

Aisha Fadl Al-Kaabi

## ABOUT THE COLLEGE

The mission of the College of Education is to provide excellence in the initial and advanced preparation of education professionals by establishing a foundation that fosters life-long learning, teaching, research, and community partnerships. The College provides:

- An educational, motivational, and supportive environment for both learning and teaching in a climate characterized by responsible freedom.
- Highly qualified education professionals and on-going professional development by supporting scholarly activities, and by sharing the responsibility of educational reform through effective partnerships.

The members of the College are committed to its conceptual framework, “Together we shape the future through excellence in teaching, scholarship, and leadership”. Our graduate programs are designed to prepare competent teachers and educational leaders to support education in Qatar. The unit learning outcomes are aligned to the Qatar National Professional Standards for Teachers and School Leaders. In January 2011, the College was awarded International Recognition for Teacher Education (IRTE) from the Center for Quality Assurance in International Education, which administers this process in collaboration with the National Council for Accreditation of Teacher Education.

## National Center for Educational Development

(NCED). NCED operates closely with the Supreme Education Council, independent schools and international partners to develop and implement a Qatar-based national comprehensive educator development program.

## DEGREE OFFERINGS

Qatar University offers two types of Master’s degrees: (1) A research-oriented degree culminating in a research-based experience typically in the form of a thesis and (2) a professional Master’s degree, which is practical in nature and emphasizes professional knowledge beyond the baccalaureate degree. In addition, the College of Education offers three Diplomas in early, special, and primary education. Masters and Diplomas offering a Professional track are indicated below.

The College of Education offers the following graduate degree programs:

- Diploma in Early Childhood Education
- Diploma in Special Education
- Diploma in Primary Education
- Diploma in Secondary Education (with concentrations in Humanities, Science and English)
- Master of Arts in Curriculum, Instruction and Assessment (Research and Professional Tracks)
- Master of Education in Educational Leadership (Professional Track)
- Master of Education in Special Education (Professional Track)

## MASTER OF ARTS IN CURRICULUM, INSTRUCTION AND ASSESSMENT

Educational Sciences Department

College of Education Building, Room I10- Room A430 Phone: (974) 4403-5124

Email: [cedgrad@qu.edu.qa](mailto:cedgrad@qu.edu.qa)

Website: [http://www.qu.edu.qa/education/cia\\_masters/index.php](http://www.qu.edu.qa/education/cia_masters/index.php)

### Head of Department

Abdullah Mohammad Hamdan Abu-Tineh

### Coordinator

Yousef Mohammad Khaled Alshaboul

## ABOUT THE PROGRAM

The Masters of Arts in Curriculum, Instruction and Assessment is designed for educators and leaders in education. The program offered is research based including course work and a capstone of 20,000-word thesis. The program is distinct in that it offers students the opportunity to develop in three important areas: curriculum, instruction and assessment through coursework and research. The Program includes a total of 30 credit hours. Students are expected to complete the program degree requirements in 2 academic years.

## MISSION

To prepare innovative educators who are able to generate, use and apply research into learning, teaching and assessment in order to enhance educational practices.

## OBJECTIVES

Upon completion of the program, candidates will be able to:

- Apply curriculum theory to practice
- Design lessons and educational environments that foster high expectations for all students
- Employ a range of instructional strategies that reflect best practice
- Use multiple formative and summative assessments to evaluate student learning
- Modify instruction in response to data and reflection
- Produce, evaluate and apply educational research

## ADMISSION REQUIREMENTS

All applicants to the Master of Arts in Curriculum, Instruction and Assessment program must meet the admission requirement to Master programs as stipulated by the QU Admission Policy as well as the following requirements to be considered for admission to Qatar University:

- Completed a Bachelor Degree or a higher level degree including postgraduate diplomas offered by the College of Education at Qatar University with a minimum cumulative GPA of 2.80 out of 4.0 or its equivalent from a higher education institution accredited by an international accrediting association or by the Ministry of Higher Education or equivalent authority in the country where the institution is affiliated.
- Achieved a minimum score of 5.5 in IELTS (Academic) or 61 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
  - Students with a minimum score of 5 in IELTS (Academic) or 45 in TOEFL iBT may be

admitted to the program. Applicants must be enrolled in English for Special Purpose (ESP) course offered by the Foundation Program at Qatar University during their first semester in the Master’s program. Applicants must successfully complete the ESP course with a minimum grade of C prior to taking the Masters courses that are taught in English.

- A satisfactory performance in the personal interview.
- Applicants are encouraged to submit standardized test scores, where available, in support of their application.

All applicants to the Master of Arts in Curriculum, Instruction and Assessment program are required to submit the following documents to the Admissions Department:

- Online Admissions Application
- Curriculum Vitae (C.V.) with personal statement
- Final, official and certified university transcripts
- One confidential recommendation letter from professors or employers
- Health Certificate
- Photocopy of the applicant’s Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application Fees

## LEARNING OUTCOMES

Graduates of the Masters of Arts in Curriculum, Instruction and Assessment will be able to:

### Teaching

- Content: Demonstrate understanding of the key theories and concepts of the subject matter.
- Pedagogy: Plan effective instruction to maximize student learning.
- Technology: Use current and emerging technologies in instructionally powerful ways.
- Diversity: Foster successful learning experiences for all students by addressing individual differences.

### Scholarship

- Scholarly Inquiry: Actively engage in scholarship by learning from and contributing to the knowledge base in education.
- Problem Solving: Arrive at data-informed decisions by systematically examining a variety of factors resources.

### Leadership

- Ethical Values: Apply professional ethics in all educational contexts.
- Initiative: Lead positive change in education

### Opportunities

Graduates of the Masters of Arts in Curriculum, Instruction and Assessment will be prepared for employment in the field of education in areas such as instructional design, curriculum development, educational assessment, as well as prepared to enter private educational bodies, universities as professionals specializing in the field of education.

### DEGREE REQUIREMENTS

#### Masters of Arts in Curriculum, Instruction and Assessment

A minimum of 30 credit hours are required to complete the Master of Arts in Curriculum, Instruction and Assessment, which includes the following:

- A minimum of 18 credit hours in Major Requirements
- A minimum of 12 credit hours in either the project option or the thesis option as detailed below:

**Thesis option:** A minimum of 6 credit hours in Thesis Option Requirements package and 6 credit hours in the Major Electives package and passing thesis defense exam.

#### Major Requirements (18 CH)

- EDCI 601 Advance Study of Curriculum Theory
- EDCI 602 Assessment Principles and Methods
- EDCI 603 Theory and Practice in Classroom Instruction
- EDCI 604 Integrating Technology in Education
- EDUC 606 Educational Research Methodologies
- EDCI 609 Research Methods and Data Analysis

#### Major Electives (6 or 9 credit hours depending on the selected option)

The Major Electives package includes the following three sub-packages:

- The Assessment sub-package,
- The Learning and Instruction sub-package, and
- The Curriculum sub-package.

Students admitted to the research track (thesis option) must complete a minimum of 6 credit hours in major elective courses taken from the same sub-package while students admitted in the professional track (project option) must complete a minimum of 9 credit hours in major elective courses taken from the same sub-package.

### Assessment Sub-Package

- SPED 604 Assessment of Students with Disabilities
- EDCI 607 Design and Evaluation of Assessment Systems
- EDCI 608 Evaluation of School Programs

### Learning and Instruction Sub-Package

- EDEL 605 Instructional Supervision
- SPED 602 Inclusive Education for Students with Disabilities
- SPED 609 Methods of Teaching Learners with Mild/Moderate Disabilities

### Curriculum Sub-Package

- SPED 602 Inclusive Education for Students with Disabilities
- EDEL 603 Educational Policy in Qatar
- EDCI 605 Critical Issues and Theories in Curriculum Design and Evaluation

### Thesis Requirements Package (6 CH)

Students admitted in the research track must complete 6 CH from the Thesis requirements package by completing the courses listed below:

- EDCI 690 Thesis

### Professional Track Requirements Package (6 CH)

Students admitted in the professional track must complete 6 CH from the Professional track requirements package by completing the courses listed below:

- EDCI 695 Internship/Final Project (3 credit Hours)
- Elective (3 credit Hours)

### STUDY PLAN

#### Master of Arts in Curriculum, Instruction and Assessment

### STUDY PLAN (Thesis Option)

FIRST YEAR (18 credit hours)			
FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EDCI 601	Advance Study of Curriculum Theory (Ar.)	3
	EDCI 602	Assessment Principles and Methods (Ar.)	3
	XXXX	Major Elective Course (Ar.)	3
<b>Total</b>			<b>9</b>
SECOND SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EDUC 606	Educational Research Methodologies (Eng)	3
	XXXX	Major Elective Course (Ar.)	3
	EDCI 603	Theory and Practice in Classroom Instruction (Ar.)	3
<b>Total</b>			<b>9</b>

SECOND YEAR (12 credit hours)			
FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EDCI 609	Research and Data Analysis (Ar)	3
	EDCI 604	Integrating Technology in Education (Eng)	3
	EDCI 690	Thesis (Eng/Ar.)	3
<b>Total</b>			<b>9</b>
SECOND SEMESTER (3 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EDCI 690	Thesis (Eng/ Ar.)	3
<b>Total</b>			<b>3</b>

### Master of Arts in Curriculum, Instruction and Assessment

#### STUDY PLAN (Professional Track Option)

FIRST YEAR (18 credit hours)			
FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EDCI 601	Advance Study of Curriculum Theory (Ar.)	3
	EDCI 602	Assessment Principles and Methods (Ar.)	3
	XXXX	Major Elective Course (Ar.)	3
<b>Total</b>			<b>9</b>
SECOND SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EDUC 606	Educational Research Methodologies (Eng)	3
	EDCI 603	Theory and Practice in Classroom Instruction (Ar.)	3
	XXXX	Major Elective Course (Ar.)	3
<b>Total</b>			<b>9</b>

SECOND YEAR (12 credit hours)			
FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EDCI 609	Research and Data Analysis (Ar)	3
	EDCI 604	Integrating Technology in Education (Eng)	3
	XXX	Elective (Ar)	3
<b>Total</b>			<b>9</b>
SECOND SEMESTER (3 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EDCI 690	Thesis (Eng/ Ar.)	3
<b>Total</b>			<b>3</b>



Term	Course #	Course Title	Cr Hrs
Spring	EDCI 695	Internship/Final Project	3
<b>Total</b>			<b>3</b>

## Master of Education in Educational Leadership

Educational Sciences Department

College of Education Building, Room I10- Room A430 Phone: (974) 4403-5124

Email: [cedgrad@qu.edu.qa](mailto:cedgrad@qu.edu.qa)

Website:  
[http://www.qu.edu.qa/education/cia\\_masters/index.php](http://www.qu.edu.qa/education/cia_masters/index.php)

### Head of Department

Abdullah Mohammad Hamdan Abu-Tineh

### Coordinator

Yousef Mohammad Khaled Alshaboul

### ABOUT THE PROGRAM

The Master of Education in Educational Leadership prepares graduates to be highly qualified school leaders for Qatar, the region, and beyond, who demonstrate knowledge and skills in developing excellence in teaching, scholarship, and leadership.

### OBJECTIVES

The Master of Education in Educational Leadership aims to:

- Prepare graduates who meet or exceed national and international standards for leaders in education.
- Encourage the habits of scholarship among faculty, candidates, and graduates, so that the program reflects and contributes to a growing body of knowledge in education.
- Graduate leaders who are committed to providing exemplary educational environments and opportunities to learn for every student.
- Reflect a commitment to diversity, equity, and justice in education.
- Honor and support professionalism and ethical practices in education.

### LEARNING OUTCOMES

Graduates of the Master of Education in Educational Leadership will be able to:

- Apply key theories and concepts of the subject matter in educational settings
- Plan effective instruction to maximize student learning.
- Use current and emerging technologies in instructionally powerful ways
- Foster successful learning experiences for all students by addressing individual differences.
- Arrive at data-informed decisions by systematically examining a variety of factors and resources
- Actively engage in scholarship in education.
- Apply professional ethics in all educational contexts.
- Lead positive change in education

### OPPORTUNITIES

Graduates of the Master of Education in Educational Leadership will be suited for employment in various leadership positions such as principals, vice principals, subject coordinators, and professional development coordinators in schools, as well as other leadership positions within government agencies, non-governmental organizations and agencies, and centers providing educational services.

### ADMISSION REQUIREMENTS

All applicants to the Master of Education in Educational Leadership program who meet the following minimum criteria will be considered for admission to Qatar University:

- Completed a Bachelor Degree or a higher level degree including postgraduate diplomas offered by the College of Education at Qatar University with a minimum cumulative GPA of 2.80 out of 4.0 or its equivalent from a higher education institution accredited by an international accrediting association or by the Ministry of Higher Education or equivalent authority in the country where the institution is affiliated.
- Achieved a minimum score of 5.5 in IELTS (Academic) or 61 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
  - Students with a minimum score of 5 in IELTS (Academic) or 45 in TOEFL iBT may be admitted to the program. Applicants must be enrolled in English for Special Purpose (ESP) course offered by the Foundation Program at Qatar University during their first semester in the Master's program. Applicants must

successfully complete the ESP course with a minimum grade of C prior to taking the Masters courses that are taught in English.

- A satisfactory performance in the personal interview.
  - Applicants are encouraged to submit standardized test scores, where available, in support of their application.
- All applicants to the Master of Education in Educational Leadership program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL or equivalent score report or other evidence of English proficiency in accordance with QU Policy
- One confidential recommendation letter from professors or employers
- Curriculum Vitae (C.V.)
- Personal Statement.
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application fee

### DEGREE REQUIREMENTS

#### Master of Education in Educational Leadership

A minimum of 33 credit hours are required to complete the Master of Education in Educational Leadership

#### Major Requirements (33 credit hours)

- EDEL 601 Foundations in Educational Leadership
- EDEL 602 Management of School Information Systems
- EDEL 603 Educational Policy in Qatar
- EDEL 604 Curriculum Design and Development
- EDEL 605 Instructional Supervision
- EDUC 606 Educational Research Methodologies
- EDEL 607 School Finance and Resource Development
- EDEL 608 Seminar in Issues in Educational Leadership
- EDEL 609 Action Research
- EDEL 610 Internship

### STUDY PLAN

Master of Education in Educational Leadership

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EDEL 601	Foundations in Educational Leadership	3
	EDUC 606	Educational Research Methodologies	3
	EDEL 604	Curriculum Design and Development	3
Total			9
SECOND SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EDEL 605	Instructional Supervision	3
	EDEL 608	Seminar in Issues in Educational Leadership	3
	EDEL 602	Management of School Information Systems	3
Total			9

THIRD SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EDEL 603	Educational Policy in Qatar	3
	EDEL 607	School Finance and Resource Development	3
	EDEL 609	Action Research	3
Total			9
FOURTH SEMESTER (6 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EDEL 610	Internship	6
Total			6

## Master of Education in Special Education

Psychological Sciences Department

College of Education Building, Room I10- Room A430 Phone: (974) 4403-5124

Email: [cedgrad@qu.edu.qa](mailto:cedgrad@qu.edu.qa)

Website: [http://www.qu.edu.qa/education/cia\\_masters/index.php](http://www.qu.edu.qa/education/cia_masters/index.php)

### Head of Department

Asma Abdulla M Al-Attayah

### Coordinator

Elsayed Elshabrawi Ahmed Hassanein

### ABOUT THE PROGRAM

The mission of the Master of Education in Special Education is to prepare Qatar's leaders in special education who will improve and facilitate the educational experiences provided to students with disabilities in the country's schools, support the country's educational reform efforts, and advance Qatari society.

### OBJECTIVES

The Master of Education in Special Education aims to:

- Develop leaders for Qatar's schools, organizations, agencies, and other entities that serve students with disabilities and their families.
- Contribute to the development and use of educational practices that are research-based and culturally and technically appropriate for Qatar's students with additional educational support needs and their families.
- Develop and advance the skills of special educators and other professionals who serve students with disabilities and their families in Qatar.
- Contribute to the special education knowledge base for Qatar, the Arab world, and beyond.

### LEARNING OUTCOMES

Graduates of the Master of Education in Special Education will be able to:

- Apply key theories and concepts of the subject matter in educational settings
- Plan effective instruction to maximize student learning.
- Use current and emerging technologies in instructionally powerful ways.

- Foster successful learning experiences for all students by addressing individual differences
- Arrive at data-informed decisions by systematically examining a variety of factors and resources.
- Actively engage in scholarship.
- Apply professional ethics in all educational contexts
- Lead positive change in education

### OPPORTUNITIES

Graduates of the Master of Education in Special Education will be suited for employment as special education teachers and in leadership positions as advisors, specialists, and coordinators in the area of special education in schools, higher education, government agencies, non-governmental organizations and agencies, and centers providing services to students with disabilities and their families.

### ADMISSION REQUIREMENTS:

All applicants to the Master of Education in Special Education program must meet the admission requirement to Master programs as stipulated by the QU Admission Policy as well as the following requirements to be considered for admission to Qatar University:

- Completed a Bachelor Degree or a higher level degree including postgraduate diplomas offered by the College of Education at Qatar University with a minimum cumulative GPA of 2.80 out of 4.0 or its equivalent from a higher education institution accredited by an international accrediting association or by the Ministry of Higher Education or equivalent authority in the country where the institution is affiliated.
- Achieved a minimum score of 5.5 in IELTS (Academic) or 61 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
  - Students with a minimum score of 5 in IELTS (Academic) or 45 in TOEFL iBT may be admitted to the program. Applicants must be enrolled in English for Special Purpose (ESP) course offered by the Foundation Program at Qatar University during their first semester in the Master's program. Applicants must successfully complete the ESP course with a minimum grade of C prior to taking the Masters courses that are taught in English.
- A satisfactory performance in the personal interview.
- Applicants are encouraged to submit standardized test scores, where available, in support of their application.

All applicants to the Master of Education in Special Education program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL or equivalent score report or other evidence of English proficiency in accordance with QU Policy
- One confidential recommendation letter from professors or employers
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application fee:

### DEGREE REQUIREMENTS

#### Master of Education in Special Education

33 credit hours are required to complete the Master of Education in Special Education, including the following:

- 18 credit hours of major requirements
  - 15 credit hours of concentration requirements
- Major Requirements (18 CH)**
- SPED 601 Issues, Policy and Practice in Special Education
  - SPED 602 Inclusive Education for Students with Disabilities
  - SPED 603 Advanced Applied Behavior Analysis
  - SPED 604 Assessment of Students with Disabilities
  - SPED 605 Collaboration with Family of Children with Disabilities
  - EDUC 606 Educational Research Methodologies
- Concentration Requirements: Mild/Moderate Disabilities (15 CH)**
- Students must complete the following 15 credit hours:
- SPED 607 Characteristics of Mild/Moderate Disabilities
  - SPED 609 Methods of Teaching Learners with Mild/Mod. Disabilities
  - SPED 611 Literacy Assessment & Remediation
  - SPED 621 Internship: Mild/Moderate Disabilities
- Concentration Requirements: Severe/Profound Disabilities (15 CH)**

Students must complete the following 15 credit hours:

- SPED 608 Characteristics of Severe/Profound Disabilities

- SPED 610 Methods of Teaching Learners with Severe/Profound Disabilities
- SPED 612 Motor Development & Learning
- SPED 622 Internship: Severe/Profound Disabilities

### STUDY PLAN

#### Master of Education in Special Education

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	SPED 601	Issues, Policy and Practice in Special Education	3
	SPED 602	Inclusive Education for Students with Disabilities	3
	SPED 603	Advanced Applied Behavior Analysis	3
Total			9
SECOND SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	SPED 604	Assessment of Students with Disabilities	3
	XXXX	Concentration Requirement	3
	EDUC 606	Educational Research Methodologies	3
Total			9

THIRD SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	SPED 605	Collaboration with Family of Children with Disabilities	3
	XXXX	Concentration Requirement	3
	XXXX	Concentration Requirement	3
Total			9
FOURTH SEMESTER (6 credit hours)			
Term	Course #	Course Title	Cr Hrs



Spring	SPED 622	Internship	6
Total			6

## LEARNING OUTCOMES

Graduates of the Diploma Programs in Education will be able to:

1. Apply key theories and concepts of the subject matter in educational settings.
2. Plan effective instruction to maximize student learning.
  - a. Design instructional plans to maximize student learning
  - b. Design a supportive educational environment
  - c. Use a range of assessments to inform teaching
3. Use current and emerging technologies in instructionally powerful ways.
4. Foster successful learning experiences for all students by addressing individual differences.
5. Arrive at data-informed decisions by systematically examining a variety of factors and resources.
6. Actively engage in scholarship in education.
7. Apply professional ethics in all educational contexts.
8. Lead positive change in education

## OPPORTUNITIES

Graduates of the Diploma Programs in Education will be prepared to be teachers in schools as well as serve as trainers, advisors, and specialists in their fields of education for organizations, agencies, and centers.

## ADMISSION REQUIREMENTS

All applicants to any of the Diploma Programs must meet the following admission requirements to be considered for admission to Qatar University:

- Completed a Bachelor's or higher level degree with a minimum cumulative GPA of 2.00 out of 4.00 from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
- Achieved a minimum score of on the IELTS or equivalent test (*for applicants to the English Concentration Only*).
- Pass the computer efficiency test in the college.
- Students must complete and succeed in a discipline specific content knowledge test.
- Personal interview.
- Write an essay.

All applicants to any of the Diploma Programs are required to submit the following documents to the Admissions Department:

- QU Online Admissions Application
- Final, official and certified university transcripts
- Health Certificate

## Post-Baccalaureate Diploma Programs in Education

College of Education

Phone: (974) 4403 5124

Email: [cedgrad@qu.edu.qa](mailto:cedgrad@qu.edu.qa)

### ABOUT THE PROGRAMS

The mission of the Diploma Programs in Education is to prepare well-qualified, motivated teachers who have the knowledge, skills, and dispositions for teaching in early childhood, primary, or secondary schools or Special Education centers. Such teachers will prepare their students to achieve educational goals at the highest international standards and represent the ideals of educational reform in Qatar and the region.

### The Degrees Available Are

- Diploma in Special Education
- Diploma in Early Childhood Education
- Diploma in Primary Education
- Diploma in Secondary Education (with Concentrations in Science, Humanities, and English)

### OBJECTIVES

The Diploma Programs in Education aim to:

- Support the vision of Qatar University by offering high quality, learning-centered education to candidates seeking teacher certification.
- Support the mission of Qatar University by preparing experts in the field of education who have the knowledge, skills, dispositions, and experiences to be successful teachers.
- Prepare graduates who understand the importance and have the skills to promote academic achievement for all students.
- Promote education reform in Qatar by preparing a body of teachers qualified to model student-centered, standards-based instruction.
- Promote ongoing research in education in Qatar by teaching and modeling inquiry methodologies and data-informed instruction.

- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent passport-size photographs (4x6 cm) with white background
- Application Fees.

For applicants who satisfy all admissions criteria listed above, admission to any of the Diploma Programs takes place in the fall semester only. For additional information on any of the programs, please see their websites at:

Early Childhood Education:  
<http://www.qu.edu.qa/education/echildhoodip>

Primary Education:  
[http://www.qu.edu.qa/education/primary\\_diploma](http://www.qu.edu.qa/education/primary_diploma)

Secondary Education:  
[http://www.qu.edu.qa/education/secondary\\_diploma](http://www.qu.edu.qa/education/secondary_diploma)

Special Education:  
[http://www.qu.edu.qa/education/special\\_diploma](http://www.qu.edu.qa/education/special_diploma)

## DEGREE REQUIREMENTS

### Post-Baccalaureate Diploma Program In Early Childhood Education

A minimum of 30 credit hours are required to complete the Post-Baccalaureate Diploma Program in Early Childhood Education, including the following:

- 6 credit hours of core curriculum requirements
- 24 credit hours of major requirements

#### Core Curriculum Requirements (6 CH)

- SPED 524 Introduction to Special Education
- EDEC 504 Management of Educational Environment in Early Childhood

#### Major Requirements (24 CH)

Students must complete the following 24 credit hours:

- EDEC 501 Child Development and Learning
- EDEC 511 Methods of Teaching in Early Childhood Education
- EDEC 513 Early Childhood- Curricula & Instructional Planning
- EDEC 522 Child Guidance
- EDEC 512 Language & Literacy Development in early childhood
- EDEC 583 Internship

### POST-BACCALAUREATE DIPLOMA PROGRAM IN PRIMARY EDUCATION

A minimum of 30 credit hours are required to complete the Post-Baccalaureate Diploma Program in Primary Education, including the following:

- 12 credit hours of core curriculum requirements
- 18 credit hours of concentration area requirements

#### Core Curriculum Requirements (12 CH)

SPED 524 Introduction to Special Education  
EDUC 505 Curriculum Development and Instructional Planning  
EDUC 502 Classroom Assessment  
EDEC 504 Management of Educational Environment in Early Childhood

#### Major Requirements (18 CH)

Students must complete the following 18 credit hours:

EDEC 501 Child Development and Learning  
EDPR 507 Methods I: Instructional Methods in Primary Education  
EDPR 508 Methods II: Inquiry and ICT in Primary Education  
EDPR 583 Internship

### POST-BACCALAUREATE DIPLOMA PROGRAM IN SECONDARY EDUCATION

A minimum of 30 credit hours are required to complete the Post-Baccalaureate Diploma Program in Secondary Education, including the following:

- 12 credit hours of core curriculum requirements
- 18 credit hours of concentration area requirements

#### Core Curriculum Requirements (12 CH)

EDUC 505 Curriculum Development and Instructional Planning  
EPSY 510 Educational Psychology  
EDUC 502 Classroom Assessment  
EDUC 504 Management of Educational Environment

#### Concentration in Science Requirements (18 CH)

Students must complete the following 18 credit hours:

- SPED 524 Introduction to Special Education
- EDSE 504 Teaching Method I for Scientifics
- EDSE 505 Teaching Method II for Scientifics
- EDSE 581 Internship

#### Concentration in Humanities Requirements (18 CH)

Students must complete the following 18 credit hours:

- SPED 524 Introduction to Special Education
- EDSE 506 Teaching Method I for humanities

- EDSE 507 Teaching Method II for humanities
- EDSE 582 Internship

**Concentration in English Requirements (18 CH)**

Students must complete the following 18 credit hours:

- SPED 524 Introduction to Special Education
- EDSE 502 Second language learners in the secondary classroom
- EDSE 559 Teaching Method I for English
- EDSE 569 Methods II: Inquiry and ICT for English
- EDSE 580 Internship

**POST-BACCALAUREATE DIPLOMA PROGRAM IN SPECIAL EDUCATION**

A minimum of 30 credit hours are required to complete the Post-Baccalaureate Diploma Program in Special Education, including the following:

- 6 credit hours of core curriculum requirements
- 24 credit hours of major requirements

**Core Curriculum Requirements (6 CH)**

- SPED 524 Introduction to Special Education
- EDUC 505 Curriculum Development and Instructional Planning

**Major Requirements (24 CH)**

Students must complete the following 24 credit hours:

- SPED 520 Assessment in Special Education
- SPED 521 Methods and Materials in Special Education
- EPSY 511 Human Development & Learning
- SPED 522 Collaboration and Partnership
- SPED 523 Applied Behavior Analysis
- SPED 583 Internship

**STUDY PLAN**

Post-Baccalaureate Diploma Programs

**Diploma of Education in Early Childhood**

**STUDY PLAN**

FIRST SEMESTER (12 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EDEC 501	Child Development and Learning	3
	EDEC 511	Methods of Teaching in Early Childhood Education	3

	EDEC 513	Early Childhood- Curricula & Instructional Planning	3
	EDEC 522	Child Guidance	3
<b>Total</b>			<b>12</b>
SECOND SEMESTER (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	SPED 524	Introduction to Special Education	3
	EDEC 504	Management of Educational Environment in Early Childhood	3
	EDEC 512	Language & Literacy Development in early childhood	3
	EDEC 583	Internship	9
<b>Total</b>			<b>18</b>

**Diploma of Education in Primary Education**

**STUDY PLAN**

FIRST SEMESTER (12 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EDEC 501	Child Development and Learning	3
	SPED 524	Introduction to Special Education	3
	EDUC 505	Curriculum Development and Instructional Planning	3
	EDPR 507	Methods I: Instructional Methods in Primary Education	3
<b>Total</b>			<b>12</b>
SECOND SEMESTER (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EDUC 502	Classroom Assessment	3

	EDEC 504	Management of Educational Environment in Early Childhood	3
	EDPR 508	Methods II: Inquiry and ICT in Primary Education	3
	EDPR 583	Internship	9
<b>Total</b>			<b>18</b>

**Diploma of Education in Special Education**

**STUDY PLAN**

FIRST SEMESTER (12 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	SPED 524	Introduction to Special Education	3
	EDUC 505	Curriculum Development and Instructional Planning	3
	SPED 520	Assessment in Special Education	3
	SPED 521	Methods and Materials in Special Education	3
<b>Total</b>			<b>12</b>
SECOND SEMESTER (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EPSY 511	Human Development & Learning	3
	SPED 522	Collaboration and Partnership	3
	SPED 523	Applied Behavior Analysis	3
	SPED 583	Internship	9
<b>Total</b>			<b>18</b>

**Diploma of Education in Secondary Education**

**STUDY PLAN (Scientifics Track)**

FIRST SEMESTER (12 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	SPED 524	Introduction to Special Education	3
	EDSE 504	Teaching Method I for Scientifics	3
	EDUC 505	Curriculum Development and Instructional Planning	3
	EPSY 510	Educational Psychology	3
<b>Total</b>			<b>12</b>
SECOND SEMESTER (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EDUC 502	Classroom Assessment	3
	EDUC 504	Management of Educational Environment	3
	EDSE 505	Teaching Method II for Scientifics	3
	EDSE 581	Internship	9
<b>Total</b>			<b>18</b>

**STUDY PLAN (Humanities Track)**

FIRST SEMESTER (12 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	SPED 524	Introduction to Special Education	3
	EDSE 506	Teaching Method I for humanities	3
Spring	EDUC 505	Curriculum Development and Instructional Planning	3
	EPSY 510	Educational Psychology	3
<b>Total</b>			<b>12</b>



SECOND SEMESTER (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EDUC 502	Classroom Assessment	3
	EDUC 504	Management of Educational Environment	3
	EDSE 507	Teaching Method II for humanities	3
	EDSE 582	Internship	9
<b>Total</b>			<b>18</b>

--STUDY PLAN (English Track)--

FIRST SEMESTER (12 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EDSE 502	Second language learners in the secondary classroom	3
	EDSE 559	Teaching Method I for English	3
	EDUC 505	Curriculum Development and Instructional Planning	3
	EPSY 510	Educational Psychology	3
<b>Total</b>			<b>12</b>

SECOND SEMESTER (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EDUC 502	Classroom Assessment	3
	EDUC 504	Management of Educational Environment	3
	EDSE 569	Methods II: Inquiry and ICT for English	3
	EDSE 580	Internship	9
<b>Total</b>			<b>18</b>



## COLLEGE OF ENGINEERING

College of Engineering Building (Men's Section)

Phone: (974) 4403-4303

Email: [CENG\\_Graduate@qu.edu.qa](mailto:CENG_Graduate@qu.edu.qa)

Website:  
<http://www.qu.edu.qa/engineering/research/graduatestudies>

### Dean

Dr. Khalid Naji

### Associate Dean for Academic Affairs

Prof. Abdelmagid Hamouda

### Associate Dean for Research and Graduate Studies

Prof. Ahmed Massoud

### Assistant Dean for Student Affairs

Eng. Waled Mukahal

## ABOUT THE COLLEGE

The mission of the College of Engineering is to prepare globally competent and socially responsible graduates by providing high-quality education. Through its quality programs and partnerships, the College fosters research and scholarly endeavors that advance knowledge and contribute to the country's welfare. In today's highly competitive, an important criterion for academic and research excellence is fostering graduate-level training that features interdisciplinary, cutting-edge research and high-quality programs. Graduate training in the College of Engineering is committed to building solid foundations in order to advance knowledge and attract high-caliber students. The College has successfully developed world-class educational programs, outstanding research activities, and strong industrial supports. It offers research and graduate programs that will enhance and advance students' knowledge, promote the growth of their values, and prepare them to meet future engineering challenges.

## DEGREE OFFERINGS

There are currently nine graduate programs of study in the College of Engineering, eight Master's degree programs, and a Doctor of Philosophy (PhD) program with 12 major fields. The CENG graduate programs involve our dedicated faculty members with recognized expertise in teaching and extensive research activities to prepare our postgraduate students for their professional careers through innovation, creativity, and advanced professional study.

The College of Engineering offers the following graduate degree programs:

- Master of Science in Civil Engineering (Thesis Track)
- Master of Science in Computing (Thesis and Project Tracks)
- Master of Science in Electrical Engineering (Thesis Track)
- Master of Science in Engineering Management (Thesis and Project Tracks)
- Master of Science in Environmental Engineering (Thesis and Project Tracks)
- Master of Science in Gas and Process Engineering (Thesis and Project Tracks)
- Master of Science in Mechanical Engineering (Thesis Track)
- Master in Urban Planning and Design (Thesis Tracks)
- Doctor of Philosophy in Architecture, Urban Planning, Chemical Engineering, Civil Engineering, Computer Science, Computer Engineering, Electrical Engineering, Mechanical Engineering, Industrial and Systems Engineering, Engineering Management, Environmental Engineering, and Materials Science and Engineering.

## Master of Urban Planning and Design

College of Engineering

Phone: (974) 4403-4340 / 4344

Email: [architecture-urban@qu.edu.qa](mailto:architecture-urban@qu.edu.qa)

Website:  
<http://www.qu.edu.qa/engineering/graduate/master-architecture>

### Head of Department

Dr. Raffaello Furlan

E-mail: [rfurlan@qu.edu.qa](mailto:rfurlan@qu.edu.qa)

Phone: 4403 4353

### Program Coordinator

Dr. Djamel Boussaa

E-mail: [djamelb60@qu.edu.qa](mailto:djamelb60@qu.edu.qa)

Phone: 4403 4346

## ABOUT THE PROGRAM

The Master of Urban Planning and Design (MUPD) is tailored to address issues of importance to the urban environment in Qatar, the GCC region, and beyond. It aims to provide students with key knowledge on each and every aspect of urban planning and design, including urban sustainability, Geographic Information Systems (GIS), landscape planning in arid regions, integrated land use, transport planning, environmental impact assessment, and more.

## OBJECTIVES

The Master of Urban Planning and Design aims to promote:

- Development of an understanding of the nature, purpose, methods and practice of planning. This includes knowledge about the governance, planning laws and politics, and their impact on individuals and communities -often in a multicultural environment- and the techniques of policy analysis and project-making.
- An understanding of processes of change in the built environment and the relationships between the social, economic and physical factors associated with the development of the built environment;
- Development of the ability to undertake a substantial outcome of specialist-based independent research.

## LEARNING OUTCOMES

Graduates of the Master of Urban Planning and Design will be able to:

- Describe urban development in MENA countries and beyond.
- Apply urban analysis methodologies to explore developmental issues.
- Demonstrate skills in land use planning, strategic planning, and participatory techniques.
- Practice sustainable urban development.
- Demonstrate proficiency in written communication by writing with clarity, conciseness, and coherence about relationships among concepts.
- Demonstrate proficiency in oral communication by giving concise, clear, and organized oral presentations, with responses and leadership for the audience.
- Engage effectively in groups on critical thinking, while participating weekly on problem-solving activities and reporting their results to the class.

## OPPORTUNITIES

Following the recent success of Qatar's national bid for the FIFA 2022 World Cup, as well as current trends in the real estate industry, major job opportunities are to be found within

the Ministry of Municipalities and Urban Planning and its departments (viz. Centre for GIS, Qatar National Master Plan, Transportation Planning Department) and other key players in the area such as Mshereib Properties, Qatari Diar, and Barwa, as well as private planning firms currently involved in the expansion of Doha.

Additionally, graduates may have opportunities to work with some international organizations that address developmental and environmental issues, including UNESCO, UNDP, UN-HABITAT and other international NGOs.

## ADMISSION REQUIREMENTS

Applicants who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Bachelor degree in a built environment-related discipline, including architecture, urban design, urban planning, planning, landscape architecture, interior architecture, construction engineering, civil engineering, or a related field with minimum cumulative GPA of 2.80 out of 4.00 from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Achieved a minimum score of 6 in IELTS (Academic) or 68 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. Passing an interview with the College's admission panel. The panel may request additional bridging course(s).

Applicants are required to submit the following documents to the Admissions Department:

- Online Admissions Application
- Official Graduation Statement
- Final and official university transcripts
- Official TOEFL (DI Code-8943) /IELTS score report or other evidence of English proficiency in accordance with QU Policy
- Two letters of recommendation from undergraduate professors or employers
- Curriculum Vitae (C.V.)
- Health Certificate issued inside Qatar
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport)
- Two (2) recent identical passport size photographs with white background
- Application Fees





FOURTH SEMESTER (6 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	MUPD 760	Thesis focuses on Urban Design	6
Total			6

FIFTH SEMESTER (3 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	MUPD 760	Thesis focuses on Urban Design	3
Total			3

## ABOUT THE PROGRAM

As Qatar enters a phase of large scale development, the economical use of construction resources and technologies and the development of sustainable designs and materials will be of prime importance to a sustainable management of civil engineering structures. The Master of Science in Civil Engineering Program offers an in depth knowledge in the fields of structural engineering, geotechnical engineering, transportation engineering, civil engineering materials, and water resources.

The mission of the Master of Science in Civil Engineering Program is to prepare students for careers in private and public sectors and for advanced research work leading to high scholarly achievements. The major emphasis of the program is to foster a deeper understanding of the engineering research process and to further develop professional skills.

The structure of the Master of Science in Civil Engineering Program is unique, as it helps engineers to be more effective technical specialists and able to manage people and projects. Conducting original research is an important goal of a Master Program study in the College of Engineering at Qatar University. Research provides a type of education not available through classroom teaching. The Master of Science in Civil Engineering program is designed to enhance students' abilities to contribute to the existing body of knowledge and to innovate and create new knowledge. Students are expected to gain strong theoretical and methodological foundations and to develop an ability to conduct research independently.

## OBJECTIVES

The Master of Science in Civil Engineering program is a challenging and rewarding. Graduates of the Master of Science in Civil Engineering program will be able to fulfill most of the following educational objectives (Obj):

1. Act professionally and ethically in a modern work environment through effective communication and leadership, and responsible teamwork.
2. Maintain the desire for innovation and engagement in lifelong learning in response to emerging technologies, social developments, and contemporary issues.
3. Conduct research and present results in scientific forums and contribute to the advancement of the scientific body of knowledge.

## LEARNING OUTCOMES

By the time he or she completes the requirements for the Master of Science in Civil Engineering program, the student will have achieved the following Learning Outcomes:

- Able to apply knowledge of mathematics and science, and specialized engineering concepts to design,

develop, and produce useful products in a chosen area of concentration.

- Able to review, analyze, and interpret the body of scientific literature, contemporary issues and innovations in their discipline area.
- Able to apply and validate innovations and discoveries in the lab or real world settings in efficient and effective ways utilizing modern engineering tools.
- Able to conduct and produce quality research in a chosen area of concentration, and understand professional and ethical responsibility.
- Able to effectively write and present the research output in international journals, conferences, patents, research proposals and other scientific venues.

## OPPORTUNITIES

Qatar's growing economy requires capable managers with solid technical skills. Demand for professionals with intermediate level research skills is not new, but the current development activities and the expansion of the economy in Qatar certainly increases the need for individuals with this skill. The need to quickly enhance the research skills of the Qatari workforce is reflected in its sustainable development activities. The Master of Science in Civil Engineering program is consistent with the recent emphasis of the State of Qatar on research and development to build a modern knowledge-based society. The program aims for excellence in engineering research with regional, national, and international importance.

## ADMISSION REQUIREMENTS

Applicants who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Bachelor degree in a civil engineering or a related field with minimum cumulative GPA of 2.80 out of 4.00 from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Achieved a minimum score of 6 in IELTS (Academic) or 68 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. Passing an interview with the College's admission panel. The panel may request additional bridging course(s).

Applicants are required to submit the following documents to the Admissions Department:

- Online Admissions Application
- Official Graduation Statement

- Final and official university transcripts
- Official TOEFL (DI Code-8943) /IELTS score report or other evidence of English proficiency in accordance with QU Policy
- Two letters of recommendation from undergraduate professors or employers
- Curriculum Vitae (C.V.)
- Health Certificate issued inside Qatar
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport)
- Two (2) recent identical passport size photographs with white background
- Application Fees

For more information regarding the admission requirements, please visit the following website:

<http://www.qu.edu.qa/students/admission/graduate/admission-requirements>

## DEGREE REQUIREMENTS

To obtain a Master's degree from Qatar University, students must complete all the degree requirements with a minimum cumulative GPA of 3.0. This includes the completion of a minimum of 36 credit hours, to complete the Master of Science degree in Civil Engineering, as follows:

- A minimum of 12 credit hours of Major Core Requirements
- A minimum of 12 credit hours of Major Electives
- A minimum of 12 credit hours in Thesis Requirements
- Pass the thesis defense exam
- Meet the publication requirements according to the graduate studies policy and the college additional requirements

### Major Core Requirements (12 CH)

Students must complete the following courses:

- GENG 602 Applied Research Methodology
- GENG 603 Advanced Numerical Analysis
- GENG 604 Project Management
- GENG 605 Applied Statistics Analysis
- GENG 606 Graduate Seminar (0 CH)

### Thesis Requirements (12 CH)

Students must complete the following course:

- CVEN 695 Thesis

### Major Electives (12 CH)

Students must complete 12 credit hours (i.e., 4 courses) from the following courses:

- CVEN 610 Advanced Topics in Civil Engineering

## Master of Science in Civil Engineering

College of Engineering, Engineering Building

Phone: (974) 4403-4121 / 4303 / 4122

Email: [graduate\\_studies@qu.edu.qa](mailto:graduate_studies@qu.edu.qa)

Website:  
<http://www.qu.edu.qa/engineering/graduate/master-civil>

### Head of Department

Dr. Mohammed Farouk Hussein

E-mail: [mhussein@qu.edu.qa](mailto:mhussein@qu.edu.qa)

Phone: 4403 4186

### Program Coordinator

Dr. Mohammed Zein Elabidin Babiker Elshafie

E-mail: [melshafie@qu.edu.qa](mailto:melshafie@qu.edu.qa)

Phone: 4403 4191



- CVEN 621 Advanced Topics in Design of Steel Structures
- CVEN 622 Structural Dynamics and Earthquake Engineering
- CVEN 623 Design of Highway Bridges
- CVEN 611 Finite Element Method
- CVEN 624 Theory of Plates and Shells
- CVEN 630 Advanced Geo-mechanics
- CVEN 661 Geometric Design of Highways
- CVEN 662 Traffic Safety Analysis
- CVEN 663 Pavement Management Systems
- CVEN 640 Hydrology
- CVEN 641 Analysis of Hydraulic Systems
- CVEN 650 Ground Water Contamination
- CVEN 660 Advanced Traffic Engineering

Fall	CVEN XXX	Technical Elective II	3
	CVEN XXX	Technical Elective III	3
	CVEN 695	Master Thesis	3
Total			9
Spring	CVEN XXX	Technical Elective IV	3
	CVEN 695	Master Thesis	6
Total			9

## Master of Science in Computing

College of Engineering, Engineering Building

Phone: (974) 4403-4121 / 4303 / 4122

Email: [ms.computing@qu.edu.qa](mailto:ms.computing@qu.edu.qa)

Website:  
<http://www.qu.edu.qa/engineering/graduate/master-computing>

### Head of Department

Dr. Abdulla Al-Ali

E-mail: [a.alali@qu.edu.qa](mailto:a.alali@qu.edu.qa)

Phone: 4403 4244

### Program Coordinator

Dr. Mohsen Mokhtar Guizani

E-mail: [mguizani@qu.edu.qa](mailto:mguizani@qu.edu.qa)

Phone: 4403 4014

### ABOUT THE PROGRAM

The Master of Science in Computing program offers students an opportunity to acquire knowledge and understanding of advanced computing topics that enable them to apply that to real-world opportunities and challenges. The program is aimed for professionals as well as fresh graduates who would like to advance their knowledge in computing to gain competitive advantage which is essential in the current growing and dynamic environments of the computing

profession. The program balances ‘applied’ and ‘theoretical’ aspects of computing, and stresses on applications of computing without neglecting research orientation. The research option provides students with the possibility to pursue further studies such as doctoral degree in computing in the future.

The Program covers a wide range of courses, such as artificial intelligence, wireless networking, service-oriented computing, advanced databases, computer security, robotics, project management, and more. It also offers continuing education opportunities to bachelor degree holders from other disciplines with non-computing exposure, to redirect their career towards computing. In order to be flexible for working professionals, the all classes of the program are offered in the evening (after 5 pm). In addition, the course schedule is compacted into ‘one-day-one-course’ per week, to fit around busy work and family schedules of the students. The Program requires the student to complete a total of 31 credit hours, either as full-time or part-time study. The expected duration of the full-time study is two years.

### OBJECTIVES

Graduates of this program will be able to achieve the following objectives:

1. Establish successful computing careers in industry or government that will advance the economic development of the country and the region.
2. Serve industry or government by providing solutions to interdisciplinary, and open-ended problems.
3. Contribute effectively to the computing profession by fostering effective interaction with colleagues, by using ethical practices and communication skills, and by pursuing further education through lifelong learning.
4. Excel in careers due to the knowledge received as graduates of the Computing program.
5. Meet the changing needs of a knowledge-based economy by adapting and responding to changes in the constantly evolving computing field.
6. Prepare themselves for research, teaching and further graduate studies in computing.

### LEARNING OUTCOMES

- Conduct independent research or project to solve a specific problem in the field of computing.
- Analyze, assimilate and produce technical documents in computing.
- Recognize professional computing practices in realistic contexts such as global, economic, environmental, and/or social issues.

- Design and evaluate a computer-based system, process, or component to meet desired needs.
- Engage in self-directed lifelong learning.

### OPPORTUNITIES

Graduates of this program would be able to expand their knowledge with the latest advances in computing technologies. The program would also assist them to enhance and consolidate their existing computing knowledge. The program offers two focus areas: The Computer Science and the Computer Engineering focus areas. The program also offers flexibility in the choice of a thesis or a project. Graduates of the Master of Science in Computing program would find themselves suitable for a variety of job environments such as academia, research, industry, government and private organizations. The program could help graduates to pursue a wide range of higher level jobs in computing related disciplines such as project manager, research associate, network systems designer, IT security officer, database administrator, IT manager etc.

### ADMISSION REQUIREMENTS

Applicants who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Bachelor degree in computer science, computer engineering, or a related field with minimum cumulative GPA of 2.80 out of 4.00 from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Achieved a minimum score of 6 in IELTS (Academic) or 68 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. Passing an interview with the College's admission panel. The panel may request additional bridging course(s).

Applicants are required to submit the following documents to the Admissions Department:

- Online Admissions Application
- Official Graduation Statement
- Final and official university transcripts
- Official TOEFL (DI Code-8943) /IELTS score report or other evidence of English proficiency in accordance with QU Policy
- Two letters of recommendation from undergraduate professors or employers
- Curriculum Vitae (C.V.)
- Health Certificate issued inside Qatar

### STUDY PLAN

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GENG 602	Applied Research Methodology	3
	GENG 603	Advanced Numerical Analysis	3
	GENG 604	Project Management	3
Total			9
Spring	GENG 605	Applied Statistics Techniques	3
	GENG 606	Graduate Seminar	0
	CVEN XXX	Technical Elective I	3
	CVEN 695	Master Thesis	3
Total			9

SECOND YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs

- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport)
- Two (2) recent identical passport size photographs with white background
- Application Fees

- CMPT 608 Advanced Architecture and Design of Computer Systems
- CMPT 611 Visual Computing
- CMPT 602 Advanced Robotics
- CMPT 683 Special Topics in Computer Engineering

For more information regarding the admission requirements, please visit the following website:  
<http://www.qu.edu.qa/students/admission/graduate/admission-requirements>

### DEGREE REQUIREMENTS

To obtain a Master's degree from Qatar University, students must complete all the degree requirements with a minimum cumulative GPA of 3.0. This includes the completion of a minimum of 31 credit hours, to complete the Master of Science in Computing, as follows:

- A minimum of 7 credit hours in Major Core Requirements.
- A minimum of 12 credit hours in one of the two focus area packages defined by the program:  
*Computer Engineering focus area package* or *Computer Science focus area package*
- A minimum of 12 credit hours in either the project option or the thesis option as detailed below:
  - **Project option:** A minimum of 3 credit hours in the Project Option Requirements package (Course Master Project: CMPT 690) and 9 credit hours in the Major Electives package or the focus area packages.
  - **Thesis option:** A minimum of 6 credit hours in Thesis Option Requirements package and 6 credit hours in the Major Electives package or the focus area packages and passing the thesis defense exam.
- Meet the publication requirements according to the graduate studies policy and the college additional requirements.

### Major Core Requirements (7 CH)

The following courses must be completed by all Master of Science in Computing students:

- GENG 602 Applied Research Methodology
- CMPT 671 Algorithm Design and Modeling
- CMPT 609 Seminar in Computing

### Computer Engineering Focus Area Package (12 CH)

Students selecting the Computer Engineering focus area must complete a minimum of 12 CH from courses in this focus area package including:

- CMPT 641 Advanced Computer Networks
- CMPT 643 Wireless Communication

### Computer Science Focus Area Package (12 CH)

Students selecting the Computer Science focus area must complete a minimum of 12 CH from courses in this focus area package including:

- CMPT 606 Advanced Database System
- CMPT 605 Advanced Software Engineering
- CMPT 673 Machine Learning
- CMPT 682 Special Topics in Computer Science
- CMPT 623 Distributed Systems and Cloud Computing
- CMPT 621 Information Retrieval

### Thesis or Research Option (6CH)

Students selecting the thesis track must complete 6 CH from the major electives package or the focus area packages in addition to the following courses:

- CMPT 695 Master Thesis

### Project Option (3CH)

Students selecting the project track must complete 9 CH from the major electives package or the focus area Packages in addition to the following course:

- CMPT 690 Project

### Major Elective (6 or 9 CH)

Students may select courses from the following list:

- CMPT 610 Embedded Computing Systems
- CMPT 612 Network Security
- CMPT 603 Applied Digital Signal processing
- CMPT 622 Human Computer Interaction
- CMPT 661 Web Development
- CMPS 653 Big Data Analytics
- CMPT 672 Enterprise Information Systems
- CMPT 645 Simulation and Modeling in Computer Networks
- CMPT 642 Information Security

### STUDY PLAN

Master of Science in Computing (Thesis Option):

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GENG 602	Applied Research Methodology	3
	CMPT XXX	One Focus Area Elective	3
	CMPT XXX	One Major Elective	3
Total			9

SECOND SEMESTER (10 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	CMPT 671	Algorithm Design and Modeling	3
	CMPT 609	Seminar in Computing	1
	CMPT XXX	One Major Elective	3
	CMPT XXX	One Focus Area Elective	3
Total			10

THIRD SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	CMPT XXX	One Focus Area Elective	3
	CMPT XXX	One Focus Area Elective	3
	CMPT 695	Master Thesis	3
Total			9

FOURTH SEMESTER (3 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	CMPT 695	Master Thesis	3
Total			3

### STUDY PLAN

Master of Science in Computing (Project Option)

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GENG 602	Applied Research Methodology	3
	CMPT XXX	One Focus Area Elective	3
	CMPT XXX	One Major Elective	3
Total			9

SECOND SEMESTER (10 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	CMPT 671	Algorithm Design and Modeling	3
	CMPT 609	Seminar in Computing	1
	CMPT XXX	One Major Elective	3
	CMPT XXX	One Focus Area Elective	3
Total			10

THIRD SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	CMPT XXX	One Focus Area Elective	3
	CMPT XXX	One Focus Area Elective	3
	CMPT XXX	One Major Elective	3
Total			9



FOURTH SEMESTER (3 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	CMPT 690	Master Project	3
Total			3

## Master of Science in Electrical Engineering

College of Engineering, Engineering Building

Phone: (974) 4403-4121 / 4303 / 4122

Email: [ceng\\_graduate@qu.edu.qa](mailto:ceng_graduate@qu.edu.qa)

Website:  
<https://www.qu.edu.qa/engineering/academics/electrical/m-sc-program>

### Head of Department

Dr. Mohammed Abdulla Al-Hitmi

E-mail: [m.a.alhitmi@qu.edu.qa](mailto:m.a.alhitmi@qu.edu.qa)

Phone: 4403 4212

### Program Coordinator

Prof. Fayçal Bensaali

E-mail: [f.bensaali@qu.edu.qa](mailto:f.bensaali@qu.edu.qa)

Phone: 4403 4234

### ABOUT THE PROGRAM

The mission of the Master of Science in Electrical Engineering (EE) program in the College of Engineering is to prepare students for careers in private and public sectors and for advanced level in research that leads to high scholarly achievements, and advanced knowledge. The major emphasis of the program is to foster a deeper understanding of the engineering research process and learn relevant professional skills. The main research themes in the EE department are power systems and renewable energy, information processing, biomedical engineering and industrial electronics and control. The EE MSc program helps the electrical engineers become more effective technical specialists and scholars, and strengthens their ability to lead people and projects. It is designed to enhance students' competencies in contributing to the existing body of knowledge and to

innovation and creation of new knowledge. Students are expected to equip themselves with strong theoretical and methodological foundations and to develop their ability to independently conduct research.

### PROGRAM OBJECTIVES

The Master of Science in Electrical Engineering program is a challenging and rewarding way of study for a higher degree. Graduates of the Master of Science in Electrical Engineering program will be able to fulfill most of the following educational objectives:

1. Act professionally and ethically in a modern work environment through effective communication and leadership, and responsible teamwork.
2. Maintain the desire for innovation and engagement in lifelong learning in response to emerging technologies, social developments, and contemporary issues.
3. Conduct research and present results in scientific forums and contribute to the advancement of the scientific body of knowledge.

### LEARNING OUTCOMES

By the time a student completes the requirements for the Master of Science in Electrical Engineering program, the student will have achieved the following Learning Outcomes:

- Able to apply knowledge of mathematics and science in a creative and innovative way to design, to develop and produce useful products and/or services for society; and be able to manage these activities.
- Able to apply knowledge of specialized Electrical engineering concepts in engineering analysis and design as well as understand the impact of their engineering solutions in global and societal context.
- Able to effectively communicate analysis and design ideas to peers, clients and customers.
- Able to review, analyze, and interpret the body of scientific literature, contemporary issues and innovations in Electrical engineering area,
- Able to apply and validate innovations and discoveries in the lab or real world settings in efficient and effective ways utilizing modern engineering tools,
- Able to conduct and produce quality research in Electrical engineering, and understand professional and ethical responsibility.
- Able to effectively write and present the research output in international journals, conferences, patents, research proposals and other scientific venues.

### OPPORTUNITIES

Qatar's growing economy requires capable engineer managers with solid technical skills in electrical engineering. The department of Electrical Engineering in the College of Engineering has already established itself as a recognized leader in many research areas related to engineering and technologies as has secured a good number of external research grants such as NPRP. The program supports the Qatar National Vision 2030 towards a modern knowledge-based society. The EE MSc program aims for excellence contributions to the electrical engineering research that has regional, national, and international importance. Moreover, the program intends to support those graduates interested in pursuing PhD studies.

### ADMISSION REQUIREMENTS

Applicants who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Bachelor degree in a electrical engineering or a related field with minimum cumulative GPA of 2.80 out of 4.00 from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Achieved a minimum score of 6 in IELTS (Academic) or 68 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. Passing an interview with the College's admission panel. The panel may request additional bridging course(s).

Applicants are required to submit the following documents to the Admissions Department:

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- Official Graduation Statement
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- Curriculum Vitae (C.V.)
- Health Certificate issued inside Qatar
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport)
- Two (2) recent identical passport size photographs with white background
- Application Fees

For more information regarding the admission requirements, please visit the following website:

<http://www.qu.edu.qa/students/admission/graduate/admission-requirements>

### DEGREE REQUIREMENTS

To obtain a Master's degree from Qatar University, students must complete all the degree requirements with a minimum cumulative GPA of 3.0. This includes the completion of a minimum of 36 credit hours, to complete the Master of Science in Electrical Engineering, as follows:

- A minimum of 9 credit hours in Major Requirements
- A minimum of 15 credit hours in Major Electives
- A minimum of 12 credit hours in Thesis Requirements
- Pass the thesis defense exam
- Meet the publication requirements according to the graduate studies policy and the college additional requirements

### Major Requirements (9 CH)

Students must complete 3 credit hours from the Major Core Requirements Sub-Package in addition to 6 CH from the Core Supporting Requirements sub-package.

### Major Core Requirements sub-package (3CH)

- GENG 602 Applied Research Methodology
- GENG 606 Graduate Seminar

### Core Supporting Requirements sub-package (6 CH)

Students must complete 6 credit hours from the following courses:

- GENG 603 Advanced Numerical Analysis
- GENG 604 Project Management
- GENG 605 Applied Statistics Analysis
- GENG 607 Optimization Methods

### Thesis Requirements (12 CH)

Students must complete the following course:

- ELEC 698 Master Thesis

### Major Electives (15 CH)

Students must complete 15 credit hours from the following courses:

- ELEC 601 Advanced Topics in Electrical Engineering
- ELEC 602 Advanced Energy Distribution Systems
- ELEC 603 Advanced Topics in Electric Power System Engineering
- ELEC 604 Advanced Wireless Communication
- ELEC 605 Bioinstrumentation
- ELEC 653 Advanced Topics in Power Electronics
- ELEC 654 Advanced Topics in Machines and Drives

- ELEC 655 Advanced Topics in Control System Theory
- ELEC 656 Advanced Digital Communication
- ELEC 657 Biomedical Signal Processing & Diagnostics
- ELEC 658 Medical Imaging
- ELEC 659 Communication and Information Theory
- ELEC 661 Power System Dynamics & Control
- ELEC 662 Advanced Digital Signal Processing
- ELEC 665 Statistical Signal Processing

Total	9
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## Master of Science in Engineering Management

College of Engineering, Engineering Building

Phone: (974) 4403-4121 / 4303 / 4122

Email: [ceng\\_graduates@qu.edu.qa](mailto:ceng_graduates@qu.edu.qa)

Website:

<http://www.qu.edu.qa/engineering/graduate/master-meng>

### Head of Department

Dr. Elsadig Mahdi

E-mail: [elsadigms@qu.edu.qa](mailto:elsadigms@qu.edu.qa)

Phone: 4403 4309

### Program Coordinator

Dr. Galal M Mohammed Abdella

Email: [gmg5005@qu.edu.qa](mailto:gmg5005@qu.edu.qa)

Phone: 4403 7388

### ABOUT THE PROGRAM

This Engineering Management (EM) program is designed to prepare professionals for the Qatari industrial world at levels higher than those requiring an undergraduate degree, while preparing them to pursue advanced research.

The structure of the Engineering Management program is unique, as it helps the engineers become more effective technical specialists, and strengthens their ability to lead people and projects. As a specialist, the engineer becomes more effective through understanding how his or her engineering skills can best support the goals of the organization and its customers. In addition, the trained engineering manager becomes uniquely qualified for two types of positions: management of technical functions, and the management of broader functions in the high-technology enterprise.

The program is fundamentally different from MBAs. MBA programs are designed to help prepare people for management roles while focusing on general business and managerial aspects rather than leveraging the technical background. However, in today's world, corporations also demand managers with strong technical backgrounds.

The world trend in graduate education suggests that MBA and EM programs are not supplementary but complementary to each other. There are many universities in the Gulf Region and around the globe which offer both programs separately.

### OBJECTIVES

Graduates of this program will be able to fulfill some of the following objectives:

1. Establish a successful engineering management careers in public and private sector. .
2. Adapt the life-long learning philosophy and build it in their career progress in management.
3. Possess knowledge and skills to design, develop, and manage projects and processes.

### LEARNING OUTCOMES

On completion of the master program, graduates will have:

- Strong technical skills and ability to use modern tools to work on complex managerial decision making problems.
- The understanding of systems approach for conceptualizing and designing complex systems.
- The ability to work in and lead multidisciplinary teams.
- The ability to develop and manage engineering operations and projects.
- The ability to incorporate economic, social, and environmental considerations in the practice of engineering management.
- The ability to understand the role of standards, ethical practices, and professional conduct.
- Skills in technical writing and oral communication.

### OPPORTUNITIES

Qatar's growing economy requires capable managers with solid technical skills. Engineering Management program will help engineers improve their managerial skills and equip them with the ability to scientifically oversee the managerial functions in various areas including infrastructure, construction, petrochemicals, utilities, power, and service industries.

### ADMISSION REQUIREMENTS

Applicants who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Bachelor degree in engineering management or a related field with minimum cumulative GPA of 2.80 out of 4.00 from a university or college accredited by an international accrediting

association or by the Ministry of Higher Education or equivalent in that country.

2. Achieved a minimum score of 6 in IELTS (Academic) or 68 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. Passing an interview with the College's admission panel. The panel may request additional bridging course(s).

Applicants are required to submit the following documents to the Admissions Department:

- Online Admissions Application
- Official Graduation Statement
- Final and official university transcripts
- Official TOEFL (DI Code-8943) /IELTS score report or other evidence of English proficiency in accordance with QU Policy
- Two letters of recommendation from undergraduate professors or employers
- Curriculum Vitae (C.V.)
- Health Certificate issued inside Qatar
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport)
- Two (2) recent identical passport size photographs with white background
- Application Fees

For more information regarding the admission requirements, please visit the following website:

<http://www.qu.edu.qa/students/admission/graduate/admission-requirements>

### DEGREE REQUIREMENTS

To obtain a Master's degree from Qatar University, students must complete all the degree requirements with a minimum cumulative GPA of 3.0. This includes the completion of a minimum of 36 credit hours, to complete the Master of Science in Engineering Management, as follows:

- A minimum of 18 credit hours in Core Requirements.
- A minimum of 12 credit hours from the three Focus Area package.
- A minimum of 6 credit hours in either the project option or the thesis option as detailed below:
  - **Project option:** A minimum of 3 credit hours in the project option requirements package and 3 credit hours in the free electives package
  - **Thesis option:** A minimum of 6 credit hours in thesis option requirements package and passing the thesis defense exam.

### STUDY PLAN

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GENG 602	Applied Research Methodology	3
	GENG 603	Major Core Course I	3
	ELEC XXX	Technical Elective	3
Total			9
Spring	GENG XXX	Major Core Course II	3
	GENG 606	Graduate Seminar	0
	ELEC XXX	Technical Elective II	3
	ELEC XXX	Technical Elective III	3
Total			9

Second YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	ELEC XXX	Technical Elective IV	3
	ELEC 698	Master Thesis	6
Total			9
Spring	ELEC XXX	Technical Elective V	3
	ELEC 698	Master Thesis	6



- Meet the publication requirements according to the graduate studies policy and the college additional requirements

Students who did not take Operations Research or an equivalent course in their prior studies should take the course *Operations Research (EMP 502)* as a bridge course to the program.

**Core courses (18 credit hours)**

- EMP 503 Business Fundamentals for Engineering Managers
- EMP 504 Process Improvement Techniques
- EMP 505 Project Management
- EMP 506 Production and Operations Management
- EMP 507 Enterprise Information Analysis and Business Applications
- EMP 508 Decision Techniques and Data Analysis

**Focus Area courses (12 credit hours)**

Students must complete a minimum of 12 credit hours from the Focus Area packages, including the Logistics & Supply Chain Focus Area package; the Operations Focus Area package; and the Construction Focus Area package, by completing three courses from one of the focus area packages and a fourth course from one of the two remaining focus area packages.

**Logistics and Supply chain Focus Area package (12 credit hours)**

- EMP 511 Physical Distribution Management
- EMP 512 Procurement Management
- EMP 513 Suppliers Management
- EMP 514 Supply Chain Management
- EMP 515 Materials & Logistics Management

**Operations Focus Area package (12 credit hours)**

- EMP 521 Facility Planning and Layout
- EMP 522 Service Operations Management
- EMP 523 Six Sigma & Strategic Quality Management
- EMP 524 Systems Analysis and Design
- EMP 525 Manufacturing & Enterprise Resource Planning
- EMP 526 Innovation and Technology Management

**Construction Focus Area package (12 credit hours)**

- EMP 531 Construction Engineering Management
- EMP 532 Estimating & Financial Analysis for Construction
- EMP 533 Construction Equipment Management

- EMP 534 Construction Contracts & Legal Concepts in Construction
- EMP 535 Concrete Formwork Design
- EMP 536 Project Planning, Scheduling and Control
- EMP 537 Engineering and Construction Materials and Methods

**Free Elective Courses**

For the project option, students concentrating in one focus area may take elective course in the other focus area, for the project option, students concentrating in one focus area may take an elective course in one of the two other focus areas (Only one elective course)

**Thesis Option Requirements (6 credit hours)**

- EMP 595: Master Thesis I
- EMP 596: Master Thesis II

**STUDY PLAN**

**Master of Science in Engineering Management**

Thesis Option

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EMP 503	Business Fundamentals for Engineering Managers	3
	EMP 504	Process Improvement Techniques	3
	EMP 507	Enterprise Information Analysis and Business Applications	3
Total			9
SECOND SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EMP 505	Project Management	3
	EMP 506	Production and Operations Management	3
	EMP 508	Decision Techniques and Data Analysis	3

Total	9
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THIRD SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall		Track Based Course	3
		Track Based Course	3
	EMP 595	Master Thesis I	3
Total			9
FOURTH SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring		Track Based Course	3
		Track Based Course	3
	EMP 596	Master Thesis II	3
Total			9

**Project Option Requirements (3 credit hours)**

- EMP 591: Master Project

**STUDY PLAN**

**Master of Science in Engineering Management**

Project Option

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EMP 503	Business Fundamentals for Engineering Managers	3
	EMP 504	Process Improvement Techniques	3

	EMP 507	Enterprise Information Analysis and Business Applications	3
Total			9
SECOND SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EMP 505	Project Management	3
	EMP 506	Production and Operations Management	3
	EMP 508	Decision Techniques and Data Analysis	3
Total			9

THIRD SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall		Track Based Course	3
		Track Based Course	3
		Free Elective	3
Total			9
FOURTH SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring		Track Based Course	3
		Track Based Course	3
	EMP 591	Master Project	3
Total			9

## Master of Science in Environmental Engineering

College of Engineering, Engineering Building

Phone: (974) 4403-4121 / 4303 / 4122

Email: [ceng\\_graduate@qu.edu.qa](mailto:ceng_graduate@qu.edu.qa)

Website:  
<http://www.qu.edu.qa/engineering/graduate/master-env-eng>

### Head of Department

Dr. Majeda Khraisheh

E-mail: [m.khraisheh@qu.edu.qa](mailto:m.khraisheh@qu.edu.qa)

Phone: 4403 4993

### Program Coordinator

Dr. Fares AlMomani

Email: [falmomani@qu.edu.qa](mailto:falmomani@qu.edu.qa)

Phone: 4403 4140

### ABOUT THE PROGRAM

The program is designed to suit engineering and suitably qualified science graduates who are seeking a formal qualification that will equip them to work and contribute to this fast developing field. The program curriculum is relevant to sustainable development of Qatar, as well as the industry's needs. In such manner, the program provides graduates with real-world input arising from the pressing needs of local industry and assist them with future employment of the program's graduates

Environmental engineers program develop sustainable solutions to environmental problems. Graduates from the program will have the knowledge and skills to deal with issues related to designing water and wastewater treatment plants, developing solid waste disposal systems, site remediation approaches and emission control measures. In addition, graduate will develop critical thinking strategies to tackle and deal with the new environmental challenges that will provide new career opportunities for environmental engineers. Successful response to the impacts of global climate change, fast-moving introduction of sustainable development practices in industry, and greener operations will require the skills of environmental engineers. Major corporations, governmental agencies, private consulting and construction

firms, and universities are just some of the organizations that employ environmental engineers.

### OBJECTIVES

Graduates of the Master of Environmental Engineering program will:

1. Contribute to sustainable development in their respective employment sectors such as industry and governmental agencies;
2. Take an active role in their continuous professional development to enable the state of Qatar to build the knowledge-based economy emphasized in QNV2030;
3. Promote ethical and professional standards in their careers with respect to the duty of care towards the environment and sustainable development.
4. Contribute to fulfilling the environmental, societal, economical and technological needs to address the challenges of the knowledge-based economy.

### LEARNING OUTCOMES

On completion of the master program, graduates will able to:

- Apply knowledge of biological science, chemistry, physics, mathematics, statistics, mass, energy and mass conservation, and transport principles needed to understand and solve environmental engineering problems.
- Design and conduct experiments necessary to gather data and create information for use in analysis and design.
- Demonstrate advanced knowledge and skills essential for professional practice of environmental engineering.
- Predict and determine fate and transport of substances in and among air, water and soil phases, as well as in engineered systems.
- Gain knowledge on globalization and other contemporary issues necessary to understand the impact of environmental engineering solutions in a global, societal, and environmental context.

### OPPORTUNITIES

Environmental engineering training offers graduates the opportunities to work in several domains of environmental protection. The major areas include air pollution control, industrial hygiene, hazardous waste management, toxic materials control, water supply, wastewater management, storm water management, solid waste disposal, public health, and land management. Within each of these major categories are many sub-specialties. The degree will enhance prospects for potential employment in Governmental bodies (Ministry of Environment, Ministry of Works), national and international industries located in and outside Qatar as well as service and

utility providers among others. Also, potential employment opportunities exist in consulting companies as well as in research institutions.

### ADMISSION REQUIREMENTS

Applicants who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Bachelor degree in environmental engineering or a related field with minimum cumulative GPA of 2.80 out of 4.00 from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Achieved a minimum score of 6 in IELTS (Academic) or 68 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. Passing an interview with the College's admission panel. The panel may request additional bridging course(s).

Applicants are required to submit the following documents to the Admissions Department:

- Online Admissions Application
- Official Graduation Statement
- Final and official university transcripts
- Official TOEFL (DI Code-8943) /IELTS score report or other evidence of English proficiency in accordance with QU Policy
- Two letters of recommendation from undergraduate professors or employers
- Curriculum Vitae (C.V.)
- Health Certificate issued inside Qatar
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport)
- Two (2) recent identical passport size photographs with white background
- Application Fees

For more information regarding the admission requirements, please visit the following website:

<http://www.qu.edu.qa/students/admission/graduate/admission-requirements>

### DEGREE REQUIREMENTS

To obtain a Master's degree from Qatar University, students must complete all the degree requirements with a minimum cumulative GPA of 3.0. This includes the completion of a minimum of 35 credit hours, to complete the Master of Science in Environmental Engineering, as follows:

- A minimum of 19 credit hours in Core Requirements
- A minimum of 16 credit hours in either the project option or the thesis option as detailed below:
  - **Project option:** A minimum of 4 credit hours in the Project Option requirement package and 12 credit hours in the Major Electives package.
  - **Thesis Option:** A minimum of 7 credit hours in Thesis Option Requirements package and 9 credit hours in the Major Electives package and passing thesis defense exam.
- Meet the publication requirements according to the graduate studies policy and the college additional requirements

### Core Requirements (19 credit hours)

- EEMP 504 Environmental Chemistry
- EEMP 505 Environmental Transport and Water Resources
- EEMP 506 Microbiological Processes in Environmental systems
- EEMP 507 Environmental Systems and Modeling
- EEMP 508 Environmental Measurements and Statistical Labs
- EEMP 509 Physico-chemical Processes in Environmental Eystems
- EEMP 510 Design Project

### Elective courses

- EEMP 621 Solid Waste Management
- EEMP 622 Hazardous Waste and Contaminated Sites Management
- EEMP 623 Marine Environment and Human Development
- EEMP 624 Environmental Sustainability
- EEMP 625 Industrial Waste Water Treatment
- EEMP 626 Clean Energy Resources
- EEMP 527 Research Strategies and Methods\*
- EEMP 628 Special Topics in Environmental Engineering
- EEMP 629 Atmospheric Pollution and Air Quality Management
- EEMP 530 Environmental Assessment and Management\*\*

\* This is a required course for thesis option.

\*\* This is a required course for project (non-thesis) option.

### Thesis Option Requirements (7 credit hours)

- EEMP 595 Master Thesis I
- EEMP 596 Master Thesis II
- EEMP 527 Research strategies and methods



## STUDY PLAN

### Master of Science in Environmental Engineering

Thesis Option

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EEMP 504	Environmental Chemistry	3
	EEMP 505	Environmental Transport and Water Resources	3
	EEMP 506	Microbiological Processes in Environmental Systems	3
Total			9

SECOND SEMESTER (10 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EEMP 507	Environmental Systems and Modeling	3
	EEMP 508	Environmental Measurements and Statistical Lab	1
	EEMP 509	Physicochemical Processes in Environmental Systems	3
	EEMP 510	Design Project	3
Total			10

THIRD SEMESTER (10 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EEMP XXX	Technical Elective	3

	EEMP 527	Research Strategies and Methods	3
	EEMP 595	Thesis	1
	EEMP XXX	Technical Elective	3
Total			10

FOURTH SEMESTER (6 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EEMP XXX	Technical Elective	3
	EEMP 695	Thesis comp	3
Total			6

#### Project Option Requirements (4 credit hours)

- EEMP 591 Industrial Master Project
- EEMP 530 Environmental Assessment and Management

## STUDY PLAN

### Master of Science in Environmental Engineering

Project Option

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EEMP 504	Environmental Chemistry	3
	EEMP 505	Environmental Transport and Water Resources	3
	EEMP 506	Microbiological Processes in Environmental Systems	3

Total	9
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SECOND SEMESTER (10 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EEMP 507	Environmental Systems and Modeling	3
	EEMP 508	Environmental Measurements and Statistical Lab	1
	EEMP 507	Environmental Systems and Modeling	3

THIRD SEMESTER (8 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	EEMP XXX	Technical Elective	3
	EEMP XXX	Technical Elective	3
	EEMP 530	Environmental Assessment & Management	2
Total			8

FOURTH SEMESTER (8 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	EEMP XXX	Technical Elective	3
	EEMP XXX	Technical Elective	3
	EEMP 591	Industrial Master Project	2
Total			8

## Master of Science in Gas and Process Engineering

College of Engineering, Engineering Building

Phone: (974) 4403-4121 / 4303 / 4122

Email: [ceng\\_graduate@qu.edu.qa](mailto:ceng_graduate@qu.edu.qa)

Website:  
<http://www.qu.edu.qa/engineering/graduate/master-gas-eng>

#### Head of Department

Dr. Majeda Khraisheh

E-mail: [m.khraisheh@qu.edu.qa](mailto:m.khraisheh@qu.edu.qa)

Phone: 4403 4993

#### Program Coordinator

Dr. Fares AlMomani

Email: [falmomani@qu.edu.qa](mailto:falmomani@qu.edu.qa)

Phone: 4403 4140

#### ABOUT THE PROGRAM

The Master of Science in Gas and Process Engineering is a challenging and rewarding program study for a higher degree. The main aim of the Master's degree program in Gas and Process Engineering is to prepare highly qualified engineers of gas and petroleum technological processes with profound knowledge of chemical engineering, petroleum production, gas processing, oil refining, and interdisciplinary subjects who would be able to apply research methods to the sustainable gas and Process development. Graduate from our program will be capable of taking a leading role in the design of processes and products, and the operation of different hydrocarbon and gas processing plants in Qatar and the region, through their transformation into diverse products for national, regional and international consumption.

The program will offer a unique opportunity for students to progress and specialize in areas related to chemical engineering and gas processing from up to downstream operations. In addition it will be a niche area of specialization that will help in satisfying the need for industry and research institutions in this area of specialty. This proposed graduate program aims to provide students with advanced academic education, technical training, and research experience. The curriculum and research will be centered on gas processing and

related industries and in addressing the local challenge associated with their operation, management, and contributing to the development of relevant technology. A distinctive and unique feature of the program is the emphasis of research projects and thesis in areas marked as national needs such as gas processing systems engineering, solar energy induced reaction, catalysis, LNG, GTL and process simulation and optimization, corrosion and flow assurance. Graduate students will be guided by faculty and working together to contribute to the advancement and dissemination of knowledge in these areas.

The Master's degree program in Gas and Process Engineering provides students with comprehensive education and engineering tools needed for the solution of future challenges, for putting forward proposals for the improvement of gas and petroleum technologies, and for work in an international environment. This wide range of applications include:

- Production of Liquefied Natural Gas (LNG) for different applications
- The use of natural gas as domestic and industrial fuel, through its transport by pipeline to and through the belt of the population centers and construction of an adequate network and distribution;
- The processing of natural gas (or other source of hydrocarbons), through the Fischer-Tropsch synthesis and other similar processes, for the production of different liquid fuels (gas oil, gasoline, etc.) and many other chemicals, which can feed other Industries such as: pharmaceuticals, cosmetics, toiletries and cleaning, fertilizers, pesticides, polymers and plastics, etc.

The curriculum of Gas and Process Engineering Master program is designed to benefit both practicing engineers and those contemplating pursuing a research-oriented career

## OBJECTIVES

Graduates of the Master of Science in Gas and Process Engineering program will:

1. Act professionally and ethically in a modern work environment through effective communication and leadership, and responsible teamwork.
2. Innovate and engage in lifelong learning in response to emerging technology, social developments, and contemporary issues.
3. Conduct research and present results in scientific forums and contribute to the advancement of the scientific body of knowledge.

## LEARNING OUTCOMES

By the time a student completes the requirements for the Master of Science in Gas and Process Engineering program,

the student will have achieved the following Learning Outcomes (LOs):

- Able to apply knowledge of mathematics and science in a creative and innovative way to design, to develop and produce useful products and/or services for society, and be able to manage these activities.
- Able to apply knowledge of specialized Gas and Process Engineering concepts in engineering analysis and design in a chosen area of concentration as well as understand the impact of their engineering solutions in a global and societal context.
- Able to effectively communicate analysis and design ideas to peers, clients, and customers.
- Able to review, analyze, and interpret the body of scientific literature, contemporary issues, and innovations in Gas and Process Engineering,
- Able to apply and validate innovations and discoveries in the lab or real-world settings in efficient and effective ways utilizing modern engineering tools,
- Able to conduct and produce quality research in Gas and Process Engineering, and understand professional and ethical responsibility.
- Able to effectively write and present the research output in international journals, conferences, patents, research proposals or other scientific venues.

## OPPORTUNITIES

Masters in Gas and Process Engineering can do research, technological, expert, advisory, and managerial work in gas technologies, oil refineries, oil fields, gas processing, petroleum and petroleum product terminals, scientific institutions, chemical processes, chemical laboratories, or continue in doctoral studies. On acquiring managerial and practical experience, they can work as executives in the petroleum business. The degree will enhance prospects for potential employment in Governmental bodies, national and international industries located in and outside Qatar as well as with service and utility providers among others. Also, potential employment opportunities exist with consulting companies and research institutions.

## ADMISSION REQUIREMENTS

Applicants who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Bachelor degree in chemical engineering, petroleum engineering, or a related field with minimum cumulative GPA of 2.80 out of 4.00 from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.

2. Achieved a minimum score of 6 in IELTS (Academic) or 68 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. Passing an interview with the College's admission panel. The panel may request additional bridging course(s).

Applicants are required to submit the following documents to the Admissions Department:

- Online Admissions Application
- Official Graduation Statement
- Final and official university transcripts
- Official TOEFL (DI Code-8943) /IELTS score report or other evidence of English proficiency in accordance with QU Policy
- Two letters of recommendation from undergraduate professors or employers
- Curriculum Vitae (C.V.)
- Health Certificate issued inside Qatar
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport)
- Two (2) recent identical passport size photographs with white background
- Application Fees

For more information regarding the admission requirements, please visit the following website:

<http://www.qu.edu.qa/students/admission/graduate/admission-requirements>

## DEGREE REQUIREMENTS

To obtain a Master's degree from Qatar University, students must complete all the degree requirements with a minimum cumulative GPA of 3.0. This includes the completion of a minimum of 30 credit hours, to complete the Master of Science in Gas and Processing Engineering degree, as follows:

- A total of 15 credit hours in Core Requirements
- A minimum of 16 credit hours in either the project option or the thesis option as detailed below:
  - **Project option:** A minimum of 3 credit hours in the Project Option requirement package and 12 credit hours in the Major Electives package.
  - **Thesis Option:** A minimum of 6 credit hours in Thesis Option Requirements package and 9 credit hours in the Major Electives package and passing thesis defense exam.
- Meet the publication requirements according to the graduate studies policy and the college additional requirements

## Major Requirements (15 CH)

Students must complete 3 credit hours from the Major Core Requirements Sub-Package in addition to 12 CH from the Core Supporting Requirements sub-package.

### Major Core Requirements sub-package (3CH)

- GENG 602 Applied Research Methodology
- GENG 606 Graduate Seminar

### Core Supporting Requirements sub-package (12 CH)

Students must complete 12 credit hours from the following courses:

- CHME 668 Downstream gas processing, Analysis, Utilization and Safety
- CHME 669 Technologies for Gas Produced Water Treatment
- CHME 660 Advanced Modeling, Control, and Optimization
- CHME 666 Advanced Application in Gas Processing

### Thesis Requirements (6 CH)

Students must complete the following course:

- CHME 695 Master Thesis

### Major Electives (12 CH)

Students must complete 12 credit hours from the following courses:

- CHME 661 Catalysis
- CHME 662 Advanced Biochemical Engineering
- CHME 663 Advanced Corrosion Engineering
- CHME 664 Chemical Engineering Process Intensification
- CHME 665 Advanced Special Topics
- CHME 658 Advanced Thermodynamics
- CHME 659 Advanced Chemical Reaction Engineering & Reactor Design

## STUDY PLAN

### Master of Science in Gas and Process Engineering

Thesis Option

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GENG 602	Applied Research Methodology	3



	GENG 606	Graduate Seminar	0
	CHME 6XX	Major Core Courses I	3
	CHME 6XX	Major Core Courses II	3
Total			9
SECOND SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	CHME 6XX	Major Core Courses III	3
	CHME 6XX	Major Core Courses IV	3
	CHME 6XX	Elective Course in Concentration I	3
Total			9

THIRD SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	CHME 695	Master Thesis	3
	CHME 6XX	Elective Course II	3
	CHME 6XX	Elective Course III	3
Total			9

FOURTH SEMESTER (3 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	CHME 695	Master Thesis	3
Total			3

## STUDY PLAN

### Master of Science in Gas and Process Engineering

#### Project Option

FIRST SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GENG 602	Applied Research Methodology	3
	GENG 606	Graduate Seminar	0
	CHME 6XX	Major Core Courses I	3
	CHME 6XX	Major Core Courses II	3
Total			9

SECOND SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	CHME 6XX	Major Core Courses III	3
	CHME 6XX	Major Elective IV	3
	CHME 6XX	Elective Course I	3
Total			9

THIRD SEMESTER (9 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	CHME 695	Elective Course II	3
	CHME 6XX	Elective Course III	3
	CHME 6XX	Elective Course IV	3

Total	9
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FOURTH SEMESTER (3 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	CHME 690	Master Project	3
Total			3

## Master of Science in Mechanical Engineering

College of Engineering, Engineering Building

Phone: (974) 4403-4121 / 4303 / 4122

Email: [ceng\\_graduate@qu.edu.qa](mailto:ceng_graduate@qu.edu.qa)

Website:  
<http://www.qu.edu.qa/engineering/graduate/master-mechanical>

### Head of Department

Dr. Elsadig Mahdi

E-mail: [elsadigms@qu.edu.qa](mailto:elsadigms@qu.edu.qa)

Phone: 4403 4309

### Program Coordinator

Dr. John-John Cabibihan

E-mail: [john.cabibihan@qu.edu.qa](mailto:john.cabibihan@qu.edu.qa)

Phone: 4403 4368

### ABOUT THE PROGRAM

The Master of Science degree program in Mechanical Engineering is a research intensive program, which offers a wide range of challenging and rewarding engineering experience. This includes research on energy, thermo-fluids, materials science and engineering, automotive, aerospace, design for sustainability, alternative-energy technologies, manufacturing processes, corrosion science and prevention,

computational mechanics, combustion, mechatronics, robotics, computational science and engineering, process optimization, and biomedical engineering. Master degree in Mechanical engineering can be tailored to meet both broad and highly specialized interests (such as Materials Science and Engineering, Manufacturing Systems) can involve applied or fundamental research, and can prepare students for employment in industrial sectors. Students with the master's degree can be also prepared to continue his education toward a doctoral degree in Mechanical Engineering.

The mission of the Master of Science in Mechanical Engineering program in the College of Engineering is to prepare students for careers in private and public sectors and for advanced level in research that leads to high scholarly achievements, and advanced knowledge. The major emphasis of the program is to foster a deeper understanding of the engineering research process and learn the professional skills.

The structure of the Master of Science in Mechanical Engineering program is unique, as it helps the engineers become more effective technical specialists, and strengthens their ability to lead people and projects. Conducting original research is an important goal of a Master program study in the College of Engineering, Qatar University. Research provides a type of education not available through classroom teaching. The Master of Science in Mechanical Engineering program is designed to enhance students' competencies in contributing to the existing body of knowledge and to innovation and creation of new knowledge. Students are expected to equip themselves with strong theoretical and methodological foundations and to develop their ability to independently conduct research.

### PROGRAM OBJECTIVES

The Master of Science in Mechanical Engineering program is a challenging and rewarding way of study for a higher degree. Graduates of the Master of Science in Mechanical Engineering program will be able to fulfill most of the following educational objectives:

1. Act professionally and ethically in a modern work environment through effective communication and leadership, and responsible teamwork.
2. Maintain the desire for innovation and engagement in lifelong learning in response to emerging technologies, social developments, and contemporary issues.
3. Conduct research and present results in scientific forums and contribute to the advancement of the scientific body of knowledge.

### LEARNING OUTCOMES

By the time a student completes the requirements for the Master of Science in Mechanical Engineering program, the student will have achieved the following Learning Outcomes:

- Able to apply knowledge of mathematics and science in a creative and innovative way to design, to develop and produce useful products and/or services for society; and be able to manage these activities.
- Able to apply knowledge of specialized Mechanical engineering concepts in engineering analysis, and design in a Mechanical as well as understand the impact of their engineering solutions in global and societal context.
- Able to effectively communicate analysis and design ideas to peers, clients and customers.
- Able to review, analyze, and interpret the body of scientific literature, contemporary issues and innovations in Mechanical engineering area,
- Able to apply and validate innovations and discoveries in the lab or real world settings in efficient and effective ways utilizing modern engineering tools,
- Able to conduct and produce quality research in Mechanical engineering, and understand professional and ethical responsibility.
- Able to effectively write and present the research output in international journals, conferences, patents, research proposals and other scientific venues.

1. Cumulative GPA of 2.80 out of 4.00 from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Achieved a minimum score of 6 in IELTS (Academic) or 68 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. Passing an interview with the College's admission panel. The panel may request additional bridging course(s).

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- Two (2) recent identical passport size photographs with white background
- Application Fees

For more information regarding the admission requirements, please visit the following website:  
<http://www.qu.edu.qa/students/admission/graduate/admission-requirements>

### DEGREE REQUIREMENTS

To obtain a Master's degree from Qatar University, students must complete all the degree requirements with a minimum cumulative GPA of 3.0. This includes the completion of a minimum of 36 credit hours, to complete the Master of Science in Mechanical Engineering, as follows:

- A minimum of 12 credit hours of Major Core Requirements
- A minimum of 12 credit hours of Major Electives
- A minimum of 12 credit hours in Thesis Requirements
- Pass the thesis defense
- Meet the publication requirements according to the graduate studies policy and the college additional requirements

### OPPORTUNITIES

Qatar's growing economy requires capable managers with solid technical skills. College of Engineering, Qatar University has already established itself as a recognized leader in many research areas related to engineering and technologies as it has secured a good number of external research grants. The program is consistent with the recent emphasis of Qatar on research and development to build a modern knowledge-based society. The Master of Science in Mechanical engineering program aims for excellence contributions to the engineering research that has regional, national, and international importance. Hence, College of Engineering Qatar University would further align itself with the vision of His Highness the Emir of Qatar, who stressed for more research by kindly allocating a considerable amount of the country's revenue to research.

Demand for professionals with intermediate level research skills is not new, but the current development activities and the expansion of the economy in Qatar certainly need individuals with this skill. The need to quickly enhance the research skills of the Qatar workforce is reflected in its sustainable development activities.

### ADMISSION REQUIREMENTS

Applicants who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Bachelor degree in mechanical engineering or a related field with minimum

### Major Core Requirements (12 CH)

Students must complete the following courses:

- GENG 602 Applied Research Methodology
- GENG 603 Advanced Numerical Analysis
- GENG 604 Project Management
- GENG 605 Applied Statistics Analysis
- GENG 606 Graduate Seminar

### Thesis Requirements (12 CH)

Students must complete the following course:

- MECH 695 Master Thesis

### Major Electives (12 CH)

Students must complete 12 credit hours from the following courses:

- MECH 581 Advanced Topics in Mechanical Engineering
- MECH 582 Mathematical Analysis of Mechanical Engineering Systems
- MECH 583 Robotics and Automation Technology
- MECH 584 Computational Fluid Dynamics
- MECH 585 Advanced Heat Transfer
- MECH 586 Advanced Fluid Mechanics
- MECH 587 Combustion and Emission
- MECH 588 Energy Conversion
- MECH 589 Renewable Energy Utilization
- MECH 590 Materials Selection
- MECH 591 Conservation and Recycling of Materials
- MECH 592 Product Design
- MECH 593 Advanced Corrosion Engineering
- MECH 594 Failure Analysis
- MECH 595 Advanced Physical Metallurgy
- MECH 596 Fatigue and Fracture of Engineering Materials
- MECH 597 Coatings and Surface Engineering
- MECH 598 Nanotechnology
- MECH 599 Mechanics of Composite
- MECH 600 Advanced Finite Element Analysis

### STUDY PLAN

Master of Science in Mechanical Engineering

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	GENG 602	Applied Research Methodology	3

	GENG 603	Advanced Numerical Analysis	3
	GENG 604	Project Management	3
Total			9
Spring	GENG 605	Applied Statistics Techniques	3
	GENG 606	Graduate Seminar	0
	MECH XXX	Technical Elective I	3
	MECH XXX	Technical Elective II	3
Total			9

Second YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall			
	MECH XXX	Technical Elective III	3
	MECH 695	Master Thesis	6
Total			9
Spring	MECH XXX	Technical Elective IV	3
	MECH 695	Master Thesis	6
Total			9

### Doctor of Philosophy in Engineering

College of Engineering, Engineering Building

Phone: (974) 4403-4123 / 4303 / 4122

Email: [ceng\\_graduate@qu.edu.qa](mailto:ceng_graduate@qu.edu.qa)

Website:  
<http://www.qu.edu.qa/engineering/research/graduatestudies/phd-program>



## Program Coordinators

Prof. Mohsen Mokhtar Guizani

Prof. Fares Abedalwally Ogleh AlMomani

Prof. Faycal Bensaali

Dr. Mohammed Zein Elabidin Babiker Elshafie

Dr. Djamel Boussaa

Dr. Galal M Mohammed Abdella

Dr. John-John Cabibihan

## ABOUT THE PROGRAM

The Doctor of Philosophy in Engineering is now offered for the first time in 2011. The mission of the doctoral program in the College of Engineering is to provide students with intensive advanced training in research that leads to the highest level of scholarly achievement, and enables them to conduct research independently to address new challenges as innovators. In the emerging development context in Qatar, this program is designed to fulfill the growing needs for engineers and scientists with advanced education and research experience. The PhD program is highly research-intensive and it is designed to enhance students' competencies in contributing to the existing body of knowledge, innovation and creation of new knowledge and techniques. Students are expected to equip themselves with strong theoretical and methodological foundations and to develop their ability to conduct research independently.

The College of Engineering has already established itself as a recognized leader in engineering and technologies. This leadership in research has further enhanced and complemented its capabilities with the offering of a doctoral degree in engineering. This program is enriched and augmented with the extensive research activities of the College of Engineering, and its world-class faculty members with expertise in sustainable research and reputation. Students enrolled in the program are required to complete a minimum of 12 credit hours of coursework and 48 credit hours of research work. A typical duration of the program is six semesters (three years) and the maximum duration is ten semesters (five years). The Program currently caters only to full-time students. The Program offers concentration on Architecture, Urban Planning, Chemical Engineering, Civil Engineering, Computer Science, Computer Engineering, Electrical Engineering, Mechanical Engineering, Industrial and Systems Engineering, Engineering Management, Environmental Engineering, and Materials Science and Engineering.

## OBJECTIVES

Graduates of the doctoral program will be able to fulfill the following educational objectives:

1. Foster innovation of new ideas, methods and techniques in science and engineering.
2. Contribute to the advancement of the scientific body of knowledge in engineering and related fields.

## LEARNING OUTCOMES

By the time a student completes all requirements of the program, the student will have achieved the following learning outcomes:

- Able to systematically review, analyze, assimilate and interpret the body of scientific literature and innovations in their area of discipline.
- Apply and validate innovations and discoveries in the lab or real- world settings in more efficient and effective ways.
- Produce high quality research.
- Disseminate effectively the research output in reputable international journals, conferences, patents, research proposals and other scientific venues.

## OPPORTUNITIES

Graduates from this doctoral program will be in a better position to secure employment in the state of Qatar and worldwide, especially in higher teaching and research institutions, NPRP projects, and in private and Government R & D sectors. The State of Qatar pledged 2.8% of its annual GDP to education and research, in support of building a knowledge-based economy in the future. This expansion in knowledge will create new employment opportunities in research centers such as QSTP, QF, Ministries, National laboratories and it is expected that PhD holders would be one of the major recruits in these entities.

## ADMISSION REQUIREMENTS

All applicants to the Doctor of Philosophy (PhD) in Engineering program who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Master's degree in a related field with a cumulative GPA of 3.0 out of 4.0 for Masters degree work from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Achieved a minimum score of 6 in IELTS (Academic) or 68 in TOEFL iBT, taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. An acceptable score on the Graduate Record Examinations Test (GRE-General) is required. The test

- must be taken within 5 years of the start of the intended semester of admission.
4. Passing an interview with the College's admission panel.

All applicants to the Doctor of Philosophy (PhD) in Engineering programs are required to submit the following documents to the Admissions Department:

- Online Admissions Application
- Official Graduation Statement
- Final, official and certified university transcripts
- Official TOEFL (DI Code-8943) /IELTS score report or other evidence of English proficiency in accordance with QU Policy
- Official GRE (DI code-7569) score report send to Qatar University
- Two confidential recommendation letters from professors or employers
- Curriculum Vitae (C.V.) with personal statement
- Health Certificate issued inside Qatar
- Proposed thesis topic or general area of research (approximately 1000 words).
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport)
- Two (2) recent identical passport size photographs with white background
- Application Fees

For more information regarding the admission requirements, please visit the following website:  
<http://www.qu.edu.qa/students/admission/graduate/admission-requirements>

## DEGREE REQUIREMENTS

### Doctor of Philosophy in Engineering

To obtain a Ph.D. degree from Qatar University, students must complete all the degree requirements with a minimum cumulative GPA of 3.0. This includes the completion of a minimum of 60 credit hours, to complete the Doctor of Philosophy in Engineering, as follows:

- A minimum of 3 credit hours in Core Required Courses
- A minimum of 9 credit hours in Concentration Elective Courses
- A minimum of 48 credit hours for the PhD Thesis
- Pass the comprehensive examination
- Pass the candidacy examination
- Pass the dissertation defense
- Meet the publication requirements according to the graduate studies policy and the college additional requirements

## Core Required Courses (3 CH)

Students must complete a 3 credit hours course namely:

- DENG 702 Applied Research Methodology

## Concentration in Architecture

Students who choose the Architecture Concentration area must complete 9 CH in the Architecture Electives package and 48 CH in the Architecture Thesis Requirement package as detailed below.

### Architecture Electives package (9 CH)

Students must complete 9 credit hours from the following courses:

- PHAP 701 Participatory Design and Planning
- PHAP 702 Architecture and Urbanism of Globalized Cities
- PHAP 710 Building Performance Assessments and Measurements
- PHAP 711 History, Theory, and Criticism in Architecture
- PHAP 712 Energy and Buildings
- PHAP 751 Advanced Special Topics in Architecture I
- PHAP 752 Advanced Special Topics in Architecture II

### Architecture Thesis Requirement (48 CH)

Students must complete the following courses:

- PHAP 899 PhD Thesis

## Concentration in Urban Planning

Students who choose the Urban Planning Concentration area must complete 9 CH in the Urban Planning Electives package and 48 CH in the Urban Planning Thesis Requirement package as detailed below.

### Urban Planning Electives package (9 CH)

Students must complete 9 credit hours from the following courses:

- MUPD 700 Local & Regional Sustainability
- MUPD 752 Theory of Urban Form and Design
- PHAP 701 Participatory Design and Planning
- PHAP 702 Architecture and Urbanism of Globalized Cities
- PHUP 751 Special Topics I
- PHUP 752 Special Topics II
- PHUP 753 Sustainable Urbanism

### Urban Planning Thesis Requirement (48 CH)

Students must complete the following courses:

- PHUP 899 PhD Thesis

### **Concentration in Civil Engineering**

Students who choose the Civil Engineering Concentration Area must complete 9 CHs of the Civil Engineering Electives package and 48 CHs in the Civil Engineering Thesis Requirement package as detailed below.

#### **Civil Engineering Electives package (9 CHs)**

Students must complete 9 credit hours from the following courses:

- CVEN 710 Advanced Special Topics I
- CVEN 711 Advanced Special Topics II
- CVEN 712 Advances in Civil Engineering Practice and Research

#### **Civil Engineering Thesis Requirement (48 CH)**

Students must complete 48 CHs from the following courses:

- CVEN 899 PhD Thesis

### **Concentration in Computer Science**

Students who choose the Computer Science Concentration area must complete 9 CH in the Computer Science Electives package and 48 CH in the Computer Science Thesis Requirement package as detailed below.

#### **Computer Science Electives package (9 CH)**

Students must complete 9 CH from the following courses:

- CMPT 711 Visual Computing
- CMPT 712 Network Security
- CMPT 723 Distributed Systems and Cloud Computing
- CMPT 742 Information Security
- CMPS 753 Big Data Analytics
- CMPT 771 Algorithm Design and Modeling
- CMPT 773 Machine Learning
- CMPT 782 Special Topics in Computer Science

#### **Computer Science Thesis Requirement (48 CH)**

Students must complete the following course:

- CMPS 899 PhD Thesis

### **Concentration in Computer Engineering**

Students who choose the Computer Engineering Concentration area must complete 9 CH in the Computer Engineering Electives package and 48 CH in the Computer Engineering Thesis Requirement package as detailed below.

#### **Computer Engineering Electives package (9 CH)**

Students must complete 9 CH from the following courses:

- CMPT 702 Advanced Robotics
- CMPT 710 Embedded Computing Systems
- CMPT 711 Visual Computing
- CMPT 712 Network Security

- CMPT 741 Advanced Computer Networks
- CMPT 743 Wireless Communication
- CMPT 773 Machine Learning
- CMPT 783 Special Topics in Computer Engineering

#### **Computer Engineering Thesis Requirement (48 CH)**

Students must complete the following course:

- CMPT 899 PhD Thesis

### **Concentration in Electrical Engineering**

Students who choose the Electrical Engineering Concentration area must complete 9 CH in the Electrical Engineering Electives package and 48 CH in the Electrical Engineering Thesis Requirement package as detailed below.

#### **Electrical Engineering Major Electives (9 CH)**

Students must complete 9 credit hours from the following courses:

- ELEC 708 Advanced Optimization Methods
- ELEC 751 Advanced Special Topics I
- ELEC 752 Advanced Special Topics II
- ELEC 758 Multimedia Processing
- ELEC 763 Electric Power Generation by Renewable Sources
- ELEC 764 Modern-Radio Frequency Communication Systems
- ELEC 767 Machine Learning
- ELEC 768 Non-Linear Control Systems
- ELEC 769 Detection and Estimation Theory

#### **Electrical Engineering Thesis Requirements (48 CH)**

Students must complete the following course:

- ELEC 899 PhD Thesis

### **Concentration in Industrial and Systems Engineering**

Students who choose the Industrial and Systems Engineering Concentration area must complete 9 CH in the Industrial and Systems Engineering Electives package and 48 CH in the Industrial and Systems Engineering Thesis Requirement package as detailed below.

#### **Industrial and Systems Engineering Electives package (9 CH)**

Students must complete 9 credit hours from the following courses:

- IENG 755 System Design and Analysis
- IENG 757 Supply Chain and Logistics Management
- IENG 758 Robotics and Automation Technology

- IENG 751 Advanced Special Topics I

#### **Industrial and Systems Engineering Thesis Requirement (48 CH)**

Students must complete the following courses:

- IENG 899 PhD Thesis

### **Concentration in Engineering Management**

Students who choose the Engineering Management Concentration area must complete 9 CH in the Engineering Management Electives package and 48 CH in the Engineering Management Thesis Requirement package as detailed below.

#### **Engineering Management Electives package (9 CH)**

Students must complete 9 credit hours from the following courses:

- DENG 704 Applied Statistics Techniques
- DENG 724 Innovation and Technology Management
- DENG 725 Sustainable Development
- DENG 726 Modelling and Simulation
- EMP 752 Advanced Special Topics II

#### **Engineering Management Thesis Requirement (48 CH)**

Students must complete the following courses:

- EMP 899 PhD Thesis

### **Concentration in Environmental Engineering**

Students who choose the Environmental Engineering Concentration area must complete 9 CH in the Environmental Engineering Electives package and 48 CH in the Environmental Engineering Thesis Requirement package as detailed below.

#### **Environmental Engineering Electives package (9 CH)**

Students must complete 9 credit hours from the following courses:

- EEMP 721 Solid Waste Management
- EEMP 724 Environmental Sustainability
- EEMP 725 Industrial Waste Water Treatment
- EEMP 733 Renewable and Sustainable Energy Systems
- EEMP 751 Advanced Special Topics in Environmental Engineering I
- EEMP 752 Advanced Special Topics in Environmental Engineering II

#### **Environmental Engineering Thesis Requirement (48 CH)**

Students must complete the following courses:

- EEMP 899 PhD Thesis

### **Concentration in Chemical Engineering**

Students who choose the Chemical Engineering Concentration area must complete 9 CH in the Chemical Engineering Electives package and 48 CH in the Chemical Engineering Thesis Requirement package as detailed below.

#### **Chemical Engineering Electives package (9 CH)**

Students must complete 9 credit hours from the following courses:

- CHME 750 Transport Phenomena
- CHME 751 Special Topic I
- CHME 752 Special Topic II
- CHME 753 Advanced Process Dynamics and Control
- CHME 761 Bioprocess Engineering
- CHME 762 Advanced Chemical Engineering Thermodynamics
- CHME 763 Advanced Reaction Engineering

#### **Chemical Engineering Thesis Requirement (48 CH)**

Students must complete the following courses:

- CHME 899 PhD Thesis

### **Concentration in Mechanical Engineering**

Students who choose the Mechanical Engineering Concentration area must complete 9 CH in the Mechanical Engineering Electives package and 48 CH in the Mechanical Engineering Thesis Requirement package as detailed below.

#### **Mechanical Engineering Electives package (9 CH)**

Students must complete 9 credit hours from the following courses:

- MECH 700 Finite element Analysis
- MECH 701 Advanced Thermodynamics
- MECH 702 Solar Energy Utilization
- MECH 741 Advanced Special Topics I
- MECH 742 Advanced Special Topics II

#### **Mechanical Engineering Thesis Requirement (48 CH)**

Students must complete the following courses:

- MECH 899 PhD Thesis

### **Concentration in Materials Science and Engineering**

Students who choose the Materials Science and Engineering Concentration area must complete 9 CH in the Materials Science and Engineering Electives package and 48 CH in the Materials Science and Engineering Thesis Requirement package as detailed below.



**Materials Science and Engineering Electives package (9 CH)**

Students must complete 9 credit hours from the following courses:

- DENG 704 Project Management
- MECH 726 Advanced Physical Metallurgy
- MSCE 761 Special Topics I
- MSCE 762 Special Topics II

**Materials Science and Engineering Thesis Requirement (48 CH)**

Students must complete the following courses:

- MSCE 899 PhD Thesis

**FULL TIME STUDY PLAN**

Doctor of Philosophy in Engineering

	📄	Candidacy Exam	
Total			12

FOURTH SEMESTER (12 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	XXX 899	PhD Thesis	12
Total			12

FIFTH SEMESTER (12 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	XXX 899	PhD Thesis	12
Total			12

SIXTH SEMESTER (12 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	XXX 899	PhD Thesis	12
	📄	Oral Defense	
Total			12

FIRST SEMESTER (6 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	DENG 702	Applied Research Methodology	3
	XXX I	Technical Elective I	3
Total			6

SECOND SEMESTER (6 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	XXX II	Technical Elective II	3
	XXX III	Technical Elective III	3
	📄	Comprehensive Exam	
Total			6

THIRD SEMESTER (12 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	XXX 899	PhD Thesis	12



## COLLEGE OF HEALTH SCIENCES

Building I03/ Room No. 412

Phone: (+974) 4403-4800

[health@qu.edu.qa](mailto:health@qu.edu.qa)

<http://www.qu.edu.qa/chs/>

### Dean

Dr. Hanan Abdul Rahim

### Head of Research and Graduate Studies

Dr. Mashael Al-Shafai

### Associate Dean for Academic Affairs

Dr. Ahmed Al-Malki

### ABOUT THE COLLEGE

The College of Health Sciences was founded on principles of fostering learning and academic excellence through its scholarly and passionate faculty. The standardized services provided to students, well-equipped laboratories, accessible facilities, dynamic diversity and talented faculty constitute an extraordinary and rich learning environment. Rooted in a culture of collaboration with other healthcare institutes in Qatar, the CHS is committed to graduating the most knowledgeable and skilled professionals who will solve major health problems and will significantly enhance the quality of the healthcare sector in Qatar. Emphasis is placed on unrelenting pursuit of knowledge through research, life-long learning, development of skills, and producing world leaders in health sciences. The college aspires to have its faculty, staff, and students achieve distinction in teaching, research, and community service, and for its health degree programs to be recognized as models of excellence and exceptional achievement. The college aims to prepare competent graduates who will contribute to the delivery of optimal healthcare, to promote research and scholarly activity and to prepare students for careers in healthcare and higher education.

### DEGREE OFFERINGS

Qatar University offers two types of Master's degrees: (1) A research-oriented degree culminating in a research-based experience typically in the form of a thesis and (2) a professional Master's degree, which is practical in nature and emphasizes professional knowledge beyond the baccalaureate degree.

The College of Health Sciences offers the following graduate degree programs:

- Master of Science in Biomedical Science (Advanced Clinical Practice/Research Track, Laboratory Management/Project Track)
- Master of Science in Public Health (Research Track, Project Track)
- Master of Genetics in Counseling
- Graduate Certificate in Biomedical Science (Advanced Clinical Practice Track, Laboratory Management Track)
- Master of Science in Human Nutrition.

### PUBLIC HEALTH DEPARTMENT

Building H06, Room 40  
Tel: +974 4403 4780

[health@qu.edu.qa](mailto:health@qu.edu.qa)

<http://www.qu.edu.qa/chs/public-health>

### Acting Department Head

Dr. Manar Elhassan

E-mail: [melhassan@qu.edu.qa](mailto:melhassan@qu.edu.qa)

Phone: 4403 7506

### Public Health, Graduate Coordinator

Dr. Karam Adawi

E-mail: [kadawi@qu.edu.qa](mailto:kadawi@qu.edu.qa)

Phone: 4403 7508

## Master of Public Health

### ABOUT THE PROGRAM

The Master of Public Health (MPH) program, established in 2015, aims to address the country's pressing burden of non-communicable diseases and lifestyle-related risk factors, including diabetes, cardiovascular disease, obesity, and road traffic accidents. This epidemiological profile demands an effective public health approach focusing on health promotion, disease prevention, and high quality, evidence-based, effective clinical care. Currently, the degree is offered in the Epidemiology concentration, with thesis or non-thesis (practicum & research project) options. The program can be completed in two years for full-time students and four years for part-time students.

### MISSION

The mission of the MPH program is to improve health in Qatar by championing a holistic, evidence-based, integrated, and inter-sectoral approach to addressing public health issues. The program will produce qualified graduates capable of translating their knowledge and skills into public health practice at the community and health services levels.

### OBJECTIVES

The goal of the program is to contribute to building the country's public health and health care infrastructure in by fulfilling the National Development Strategy goals for a qualified and diversified health workforce. It aims to give students the knowledge base and skill set needed for the effective and ethical practice of public health in line with context-specific needs and international best practices.

### EDUCATIONAL OBJECTIVES

- Provide students with advanced public health instruction in accordance to local needs and international standards
- Equip students with the technical and analytical skills needed for identification of health problems and effective design and evaluation of appropriate interventions
- Equip students with the leadership and inter-personal skills required for successful professional development, including communication skills, cultural competence, and emotional intelligence

### LEARNING OUTCOMES

Graduates of the Master of Public Health will be able to:

- Analyze the biological, physical, social, economic, and political determinants of a health issue
- Demonstrate knowledge of basic epidemiological designs and statistical methods
- Analyze health care systems and policies
- Design, conduct and disseminate findings from a research or practice development project
- Communicate health information to diverse audiences
- Apply ethical principles in public health practice
- Adopt a multidisciplinary approach in assessing, researching, and responding to public health issues and needs
- Develop the capacity to plan, design, implement, analyze and interpret epidemiological studies

### POTENTIAL CAREERS

Graduates of the MPH will be equipped with advanced knowledge and skills in various fields including:

- Practice: such as epidemiology, biostatistics, surveillance and monitoring, health improvement, health care quality, health care safety, health policy analysis, and economic evaluation.
- Academia: pursuing further graduate work or teaching in educational institutions
- Research: applied and basic research in research centers and institutions

There are many employment opportunities in the growing Qatari health sector including:

- Hamad Medical Corporation
- Ministry of Public Health
- Primary Health Care Corporation
- Sidra Medicine
- Qatar Diabetes Association
- Qatar Red Crescent Society
- Planning and Statistics Authority
- Qatar Petroleum
- Qatar Foundation
- International organizations such as the WHO, UNICEF and others

### ADMISSION REQUIREMENTS

All applicants to the Master of Public Health program who meet the following minimum criteria will be considered for admission to Qatar University.

1. Applicants who completed a Bachelor level or an equivalent degree or a higher level degree in a health/public health related field with a minimum cumulative GPA of 2.80 out of 4.00 or equivalent from a university or college accredited by an international accrediting association, or by the Ministry of Higher Education or comparable authority in that country may be admitted to either the research or the professional tracks offered by the program.
2. Achieved a minimum score of 520 on the paper-based TOEFL or its equivalent taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. A satisfactory performance in the personal interview with the Admissions Committee.
4. In addition to the above criteria, admission in the research track (Thesis option) of the program is subject to approval by the Program Coordinator and the Dean of Graduate Studies.

All applicants to the MPH program are required to submit the following documents to the Admissions Department:



- Complete Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL score report or equivalent score report or other evidence of English proficiency in accordance with QU Policy.
- Two confidential recommendation letters from undergraduate professors or employers
- Curriculum Vitae (C.V.)
- Personal Statement
- Health Certificate
- Photocopy of the applicant's Qatar ID card, If available (Non-Qatari applicants must provide a copy of their passport)
- Two recent passport sized photograph
- Application Fees

Admission to the MPH program takes place in the fall semester only. For additional information on the program, please see our website at: <http://www.qu.edu.qa/chs/public-health/graduate/master>

#### DEGREE REQUIREMENTS

##### Master of Public Health

A minimum of 42 credit hours are required to complete the MPH including the following:

- A minimum of 18 credit hours in Major Core Requirements
- A minimum of 15 credit hours in Concentration Requirements
- A minimum of 3 credit hours in major electives
- A minimum of 6 credit hours in Thesis OR Practicum & Research Project requirements

##### Major Core Requirements (18 CH)

The following courses must be completed by all MPH students:

- PUBH 600 Concepts and methods of epidemiology
- PUBH 601 Concepts and methods of biostatistics
- PUBH 602 Social and behavioral sciences
- PUBH 603 Research design and methods
- PUBH 604 Foundations of environmental health
- PUBH 605 Health services management and leadership

##### Concentration Area Requirements (15 CH)

Students must complete a minimum of 15 Credit Hours for the epidemiology concentration as detailed below.

- PUBH 610 Advanced epidemiologic methods
- PUBH 611 Epidemiology of communicable and non-communicable diseases
- PUBH 612 Categorical data analysis
- PUBH 613 Continuous data analysis

- PUBH 614 Evidence-based public health
- PUBH 615 Supervised field experience- Epidemiology

##### Major Electives Courses (3 CH)

Students must complete 3 credit hours from the following list of Elective Courses:

- PUBH 606 Clinical epidemiology
- PUBH 607 Special topics I: Health Economics
- PUBH 608 Special topics II: Introduction to Introduction to qualitative research methodologies in health sciences

##### Project (non-thesis) Option Required Courses (6 CH)

Students admitted in the professional track must complete the following courses:

- PUBH 640 Practicum
- PUBH 641 Research project

##### Thesis Option Required Courses (6 CH)

Students admitted in the research track must complete the following courses:

- PUBH 695 Thesis

#### STUDY PLAN

##### Master of Public Health- Epidemiology concentration

FIRST YEAR (21 credit hours)			
Term	Course #	Course Title	Cr Hrs.
Fall	PUBH 600	Concepts and Methods of Epidemiology	3
	PUBH 601	Concepts and Methods of Biostatistics	3
	PUBH 602	Social and Behavioral Sciences	3
	PUBH XXX	Major Elective * (only one Elective is required)	3
Total			9-12*
Spring	PUBH 603	Research design and methods	3

	PUBH 604	Foundations of environmental health	3
	PUBH 605	Health services management and leadership	3
	PUBH XXX	Major Elective * (only one Elective is required)	3
Total			9-12*

Total	9
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\* Students should complete only one elective course in their first year either in the fall or spring semester

SECOND YEAR (21 credit hours)			
Term	Course #	Course Title	Cr Hrs.
Fall	PUBH 610	Advanced Epidemiologic Methods	3
	PUBH 611	Epidemiology of Communicable and Non-communicable Diseases	3
	PUBH 612	Categorical Data Analysis	3
	PUBH 640	Practicum (For non-thesis option only)	3
	PUBH 695	Thesis (For thesis option only)	3
Total			12
Spring	PUBH 613	Continuous Data Analysis	3
	PUBH 614	Evidence-Based Public Health	2
	PUBH 615	Supervised Field Experience- Epidemiology	1
	PUBH 641	Research Project (For non-thesis option only)	3
	PUBH 695	Thesis (For thesis option only)	3

## Biomedical Science Department

Ibn Albitar (I06) Building

Phone: (+974) 4403-4800

[health@qu.edu.qa](mailto:health@qu.edu.qa)

<http://www.qu.edu.qa/chs/biomedical-sciences>

### Department Head

D. Maha Al-Asmakh

E-mail: maha.alasmakh@qu.edu.qa

Phone: 4403 4789

### Biomedical Sciences, Graduate Coordinator

Dr. Layla Y. Kamareddine

E-mail: lkamareddine@qu.edu.qa

Phone: 4403 6015

## Master of Science In Biomedical Science

### ABOUT THE PROGRAM

The Master of Science in Biomedical Sciences Program provides students with skills and knowledge for professional enhancement. The program offers two concentration areas one in Advanced Clinical Practice/research track and another in Laboratory Management/professional track. Graduates of the program may be candidates for positions as laboratory managers, education coordinators, hospital or university faculty members, researchers, departmental supervisors, etc. The degree is offered in two concentrations; Advanced Clinical Practice with thesis option, and Laboratory management with project option.

### MISSION

The mission of the Biomedical Science Program at QU is to provide quality education that prepares future competent Biomedical Scientists with theoretical knowledge; practical, critical thinking, communication skills; and ethics for the healthcare industry. Graduates are committed to life-long learning and adapt to the changing needs of society.

### OBJECTIVES

The principle operational objective of the Biomedical Science Program is to address the need for the local workforce by

providing excellent health services according to world-class standards. The Master's degree in Biomedical Sciences prepares students for research in clinical laboratory field, for technical and mid-management positions in universities, medical and research laboratories. The curriculum emphasizes advanced principles of medical laboratory sciences in areas such clinical chemistry, microbiology, hematology & immunohematology, molecular diagnostics and lab management. The degree provides formal training in clinical sciences through theoretical and practical coursework and the application of coursework to a research or applied project.

### Graduates of this M.Sc. program will:

- Apply advanced knowledge to evaluate and solve problems related to biomedical laboratory testing, technical and administrative procedures
- Possess effective communication skills in a variety of professional settings
- Design, conduct and evaluate various types of research in their substantive area according to ethical standards

### ADMISSION REQUIREMENTS

All applicants to the Master of Science in Biomedical Sciences program who meet the following minimum criteria will be considered for admission to Qatar University:

- Applicants who completed a Bachelor level or an equivalent degree or a higher-level degree in biomedical science, biology or related fields with a minimum cumulative GPA of 2.80 out of 4.00 or equivalent from a university or college accredited by an international accrediting association, or by the Ministry of Higher Education or comparable authority in that country may be admitted to either the research or the professional tracks offered by the program.
- Achieved a minimum score of 520 on the paper-based TOEFL or equivalent test taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
- A satisfactory performance in the personal interview with the Admission committee.
- Applicants who passed the Medical Laboratory Scientist (MLS) exam offered by the Board of Certification (BOC) of the American Society for Clinical Pathology will be given a particular attention during the admission process.

### APPLICATION PROCEDURE:

All applicants to the Master of Science in Biomedical Sciences program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL score report or equivalent score report or other evidence of English proficiency in accordance with QU Policy.
- Two confidential recommendation letters from undergraduate professors or employers
- Curriculum Vitae (C.V.)
- Health Certificate
- Photocopy of the applicant's Qatar ID card, If available (Non-Qatari applicants must provide a copy of their passport)
- Two recent passport sized photograph
- Application Fees

Admission to the Master of Science in Biomedical Sciences program takes place in the fall semester only. For additional information on the program, please see our website at: [http://www.qu.edu.qa/chs/academic\\_programs/master\\_biomedical/outcomes.php](http://www.qu.edu.qa/chs/academic_programs/master_biomedical/outcomes.php)

### LEARNING OUTCOMES

Graduates of the Master of Science in Biomedical Science will be able to:

- Use statistical techniques, skills and tools to analyze problems, generate alternatives and evaluate their consequences.
- Demonstrate effective communication skills at the individual and group levels.
- Demonstrate ethical choices, values, safe and professional behavior in laboratory operation and management roles.
- Conduct experimental or theoretical study committed to ethical standards.
- Apply knowledge in the specific specialty discipline to accurately interpret patients' results.
- Use laboratory techniques and equipment related to profession.
- Analyze laws and regulations that impact healthcare organizations, health services delivery and patient safety. Demonstrate critical thinking and effective decision-making through financial management, operations management, personnel management, marketing management and quality assessment and improvement.

### Potential Careers

Graduates of the Master of Science in Biomedical Sciences are offered employment opportunities to work in many aspects of the clinical laboratory. The major areas include Clinical Chemistry, Hematology, Immunohematology & Blood Banking, Microbiology, Cytogenetic, Molecular diagnostics and Laboratory Management and Administration. Potential employers include but are not limited to:

- Laboratory Medicine & Pathology, Hamad Medical Corporation
- Biomedical Research Department, Mistry of Public Health
- Pathology & Laboratory Medicine, Al-Ahli Hospital
- Weill Cornell Medical College of Qatar
- Laboratory Al-Khor Hospital
- Sidra Medicine
- Aspetar
- Biobank labs and QBRI

### DEGREE REQUIREMENTS

#### Master of Science in Biomedical Science

A minimum of 36 credit hours are required to complete the Master of Science in Biomedical Sciences including the following:

- A minimum of 15 credit hours in Major Core Requirements
- A minimum of 21 credit hours in Concentration Requirements
- Passing thesis defense exam

#### Major Core Requirements (15 CH)

The following courses must be completed by all Master of Science in Biomedical Sciences students:

- BIOM 510 Pathophysiology
- BIOM 520 Principles of Laboratory Management
- BIOM 530 Current Issues in Clinical Laboratory Science
- BIOM 540 Research Methods in Biomedical Sciences
- BIOM 550 Medical Laboratory Laws and Ethics

#### Concentration in Advanced Clinical Practice (21 CH)

Students who choose the Advanced Clinical Practice Concentration/Thesis option must complete 21 CH as detailed below:

#### Thesis Option Required Courses (9 CH)

- BIOM 515 Molecular Diagnostics
- BIOM 698 Thesis I
- BIOM 699 Thesis II

#### Advanced Clinical Practice Electives Courses (12 CH)

- BIOM 650 Pathogenic Microbiology



- BIOM 651 Viral Pathogenesis and Diagnosis
- BIOM 660 Biochemistry
- BIOM 670 Principles of Immunochemistry
- BIOM 675 Immunology and Serology
- BIOM 680 Oncology
- BIOM 681 Advanced Hematology
- BIOM 682 Advanced Immunohematology
- BIOM 665 Special topics in Biomedical Science I
- BIOM 666 Special topics in Biomedical Sciences II

#### Concentration in Laboratory Management (21 CH)

Students who choose the Laboratory Management Concentration area/Project option must complete 21 CH in the Laboratory Management Concentration Core Requirements as detailed below:

#### Laboratory Management Concentration Core Requirements (21 CH)

- BIOM 610 Medical Lab Financial Operation
- BIOM 620 Health Informatics
- BIOM 630 Quality Assurance & Outcome Assessment
- MAGT 602 Human Resource Management
- MAGT 603 Operations Management
- MAKT 604 Marketing Management
- BIOM 695 Capstone in Laboratory Management

#### STUDY PLAN

Advanced Clinical Practice - Thesis Option

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs.
Fall	BIOM 510	Pathophysiology	3
	BIOM 520	Principles of Laboratory Management	3
	BIOM 550	Medical Lab Laws and Ethics	3
Total			9
Spring	BIOM 530	Current Issues in Clinical Laboratory Sciences	3
	BIOM 540	Research Methods in Biomedical Sciences	3

	BIOM 515	Molecular Diagnostics	3
Total			9

SECOND YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs.
Fall		Elective	3
		Elective	3
	BIOM 698	Thesis I	3
Total			9
Spring		Elective	3
		Elective	3
	BIOM 699	Thesis II	3
Total			9

Laboratory Management - Project Option

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs.
Fall	BIOM 510	Pathophysiology	3
	BIOM 520	Principles of Laboratory Management	3
	BIOM 550	Medical Lab Laws and Ethics	3
Total			9
Spring	BIOM 530	Current Issues in Clinical Laboratory Sciences	3
	BIOM 540	Research Methods in Biomedical Sciences	3

	BIOM 620	Health Informatics	3
Total			9

SECOND YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs.
Fall	BIOM 610	Medical Lab Financial Operation	3
	MAKT 604	Marketing Management	3
	MAGT 602	Human Resource Management	3
Total			9
Spring	MAGT 603	Operations Management	3
	BIOM 630	Quality Assurance & Outcome Assessment	3
	BIOM 695	Capstone in Laboratory Management	3
Total			9

### Certificate of Science in Biomedical Science

#### Program Coordinator

Dr. Layla Y. Kamareddine

E-mail: [lkamareddine@qu.edu.qa](mailto:lkamareddine@qu.edu.qa)

Phone: 4403 6015

#### ABOUT THE PROGRAM

The one-year Biomedical Sciences Certificate comprises explicit courses that are also offered in the Master degree of Biomedical Science Program. The concluded 12 credit hours of this certificate program by the enrolled students will count towards the MSc degree in Biomedical Sciences in terms of prospect admissions. This certificate program offers the

students a gradual progression of their knowledge and skills in Biomedical Science and support the experienced candidates to catch-up with the admission requirements. The certificate program is a transitional platform to the MSc degree in Biomedical sciences. It gives the opportunity for students with GPA less than 2.8 to pursue the Master degree. The enrollment of this certificate program takes place once every Fall. Students must complete the certificate program with a GPA of 3.2 or higher to enter the master program.

#### ADMISSION REQUIREMENTS

The admission of students into the certificate program in biomedical sciences will follow the same requirements established by Qatar University for graduate certificate programs admissions. Accordingly, the applicants that meet the following minimum criteria established by Qatar University will be considered for admission:

- Completed Bachelor or graduate degree in health sciences majors with minimum cumulative GPA of 2.00 or equivalent from an accredited institution of higher education or recognized by the Ministry of Higher Education of the applicant's home country and that of the State of Qatar are eligible for admission to the graduate certificate in corrosion.
- Demonstrate English proficiency by satisfying either of the following:
  - Earned a previous degree from an institution of higher education in a program where English was the language of instruction.
  - Obtained a program approved TOEFL score of (520 paper-based; 190CBT; 68iBT), or its equivalent, taken within the last two years.
- A satisfactory performance in the personal interview with the Admission Committee.

Upon completion of the Graduate Certificate program and upon admission to the graduate program, courses from the Certificate program will be counted toward the degree requirements of the graduate program.

#### STUDY PLAN

Advanced Clinical Practice Track Certificate

12 credit hours to be completed in one year

Term	Course #	Course Title	Cr Hrs.
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Fall	BIOM 510	Pathophysiology	3
	BIOM 550	Medical Laboratory Laws and Ethics	3
			6
Spring	BIOM 540	Research Methods in Biomedical Sciences	3
	BIOM 515	Molecular Diagnostics	3
			6
Total			12

Phone: 4403 5589

#### ABOUT THE PROGRAM

Students admitted to the MSc in Genetic Counselling at QU will learn through courses, research, seminars and clinical placements to enhance their knowledge and proficiency in the practice of genetic counselling. Graduates will be able to conduct counselling themselves in accordance with the ethical, legal and professional principles and values of the profession. The program will include 46 credit hours, will be offered to both male and female students, and the language of instruction for all courses will be English. The Master in Genetic Counselling program is a full-time, two-year program that awards the professional degree of Master of Science in Genetic Counselling.

#### MISSION

The mission of the Master in Genetic Counselling is to provide the healthcare sector in Qatar & the gulf region with motivated, competent genetic counsellors that have the requisite knowledge, skills and experience to meet the needs of an expanding landscape in genetics and genomics.

The program plans to accomplish its mission by providing lectures, course work, seminars, research projects, and clinical rotations to its students in a nurturing and challenging atmosphere most conducive to learning.

#### OBJECTIVES

The proposed program aspires to provide its graduate with a high-quality education to maximize their academic, research, clinical and professional development into genetic counselors. It aims to prepare graduates of the Master in Genetic Counselling to:

- Provide high-quality, patient-centered, culturally competent care
- Contribute to the advancement of knowledge in Genetics (Genomics) and improve care through rigorous research
- Facilitate incorporation of available genomic discoveries into practice and serve as leaders in genetic counselling.

#### ADMISSION REQUIREMENTS

All applicants to the Master of Science in Genetic Counselling program who meet the following minimum criteria will be considered for admission to Qatar University:

1. A completed Bachelor Degree in a health-related field or an equivalent undergraduate level degree or higher, with

a minimum cumulative GPA of 2.8 out of 4.0 or equivalent for the undergraduate degree and from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or comparable in that country .

2. Achieved a minimum score of 520 on the paper-based TOEFL or equivalent test (e.g. IELTS score of 6.0), taken within 2 years of the start of the intended semester of admission OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
3. Successfully completing an interview with satisfactory performance
4. Commitment to be a full-time student in the Masters of Genetic Counselling Program
5. Desired: experience (volunteer work) at a hospital interacting with patients or a counselling center (including phone counselling, mental health crisis training, etc)

#### APPLICATION PROCEDURE:

All applicants to the Master of Science in Genetic Counseling program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL score report or equivalent score report or other evidence of English proficiency in accordance with QU Policy.
- Two confidential recommendation letters from undergraduate professors or employers
- Curriculum Vitae (C.V.)
- Health Certificate
- Photocopy of the applicant's Qatar ID card, If available (Non-Qatari applicants must provide a copy of their passport)
- Two recent passport sized photograph
- Application Fees

Admission to the Master of Science in Biomedical Sciences program takes place in the fall semester only. For additional information on the program, please see our website at: <http://www.qu.edu.qa/chs/biomedical-sciences/master/genetic-counselling/about>

#### LEARNING OUTCOMES

Graduates of the Master of Science in Genetic Counselling will be able to:

- Deep and broad knowledge of genetics and genomics: Demonstrate and apply advanced knowledge in human, medical and public health genetics; demonstrate the

ability to apply complex principles such as etiology, genetic heterogeneity, natural history, differential diagnoses, genetic testing, variant interpretation, recurrence risk, management, prevention and population screening

- Expertise in genetic testing: Investigate and identify the availability, analytic validity, clinical validity/utility of diagnostic and predictive genetic testing; facilitate genetic testing for patients by identifying the most appropriate test and laboratory, presenting the options to the patient in a non-directive manner
- Risk assessment skills: Students must be able to calculate probability of disease for patient and family members using relevant knowledge of the condition, information gained through a pedigree, genetic testing results, and any other pertinent factors such as environmental exposures or risk models
- Psychosocial counseling skills: Demonstrate effective communication behaviors and skills; establish a working relationship and personalized genetic counseling agenda with each patient at the outset of a session; engage in relationship-building techniques; apply active listening and interviewing skills to identify, assess, and empathically respond to stated and emerging patient concerns, emotions, individual and family experiences, beliefs and behaviors, values, religion, coping mechanisms and adaptive capabilities
- Cultural competence: Evaluate impact of genetic test results on families in the Middle East; understand the unique issues surrounding genetics and the Arab population; facilitate patient decision-making that reflects the client's values but is also within Sharia law; navigate social stigmatization and counsel patients about their concerns; apply genetic counseling skills in a culturally responsive and respectful manner to all patients.
- Ethical awareness and practice: Apply ethical principles to guide and inform genetic counselling practice; recognize the professional and legal importance of medical documentation and confidentiality; identify and analyse ethical and moral dilemmas arising in genetic counselling practice, seeking outside consultation when needed; interpret and apply genetic counselling skills in relation to Sharia and local laws.
- Research skills: Develop rigorous skills for all aspects of research, beginning with the development of an ethical, sound study proposal to effective implementation of a supervised clinical research project; differentiate considerations specific to genetic versus genomic and clinical versus research testing in terms of the informed consent process, results disclosure, institutional review board (IRB) guidelines, and patient decision-making.

#### STUDY PLAN

Laboratory Management Track Certificate

12 credit hours to be completed in one year			
Term	Course #	Course Title	Cr Hrs.
Fall	BIOM 520	Principle of laboratory management	3
	BIOM 550	Medical Laboratory Laws and Ethics	3
			6
Spring	BIOM 630	Quality Assurance & Outcome Assessment	3
	MAGT 603	Operational Management	3
			6
Total			12

### Master of Science Genetic Counseling

#### Program Coordinator

Dr. Mashael Nedham A J Alshafai

E-mail: [malshafai@qu.edu.qa](mailto:malshafai@qu.edu.qa)



## POTENTIAL CAREERS

- The majority of graduates of the master genetic counselling are expected to work as genetic counsellors in various health institutions in Qatar such as Hamad Medical Cooperation, Sidra Medicine and Primary Health Care Corporation.
- Graduate may also work in research in various research centers/ universities such as Qatar University, Hamad Bin Khalifa University, Biomedical Research Center, Qatar Biomedical Research Institute as well as in policy-making in the ministry of public health.

## STUDY PLAN

FIRST YEAR (24 credit hours)			
Term	Course #	Course Title	Cr Hrs.
Fall	GENC 621	Genetic Counselling Practicum I	3
	GENC 610	Principles of Genetic Counselling	3
	GENC 611	Cytogenetics & Developmental Biology	2
	GENC 612	Medical and Human Genetics I	3
Total			11
Spring	BIOM 515	Molecular Diagnostic	3
	GENC 622	Genetic Counselling Practicum II	2
	BIOM 540	Research Methods in Biomedical Sciences	3
	GENC 613	GENC613 Medical and Human Genetics II	3
Total			11

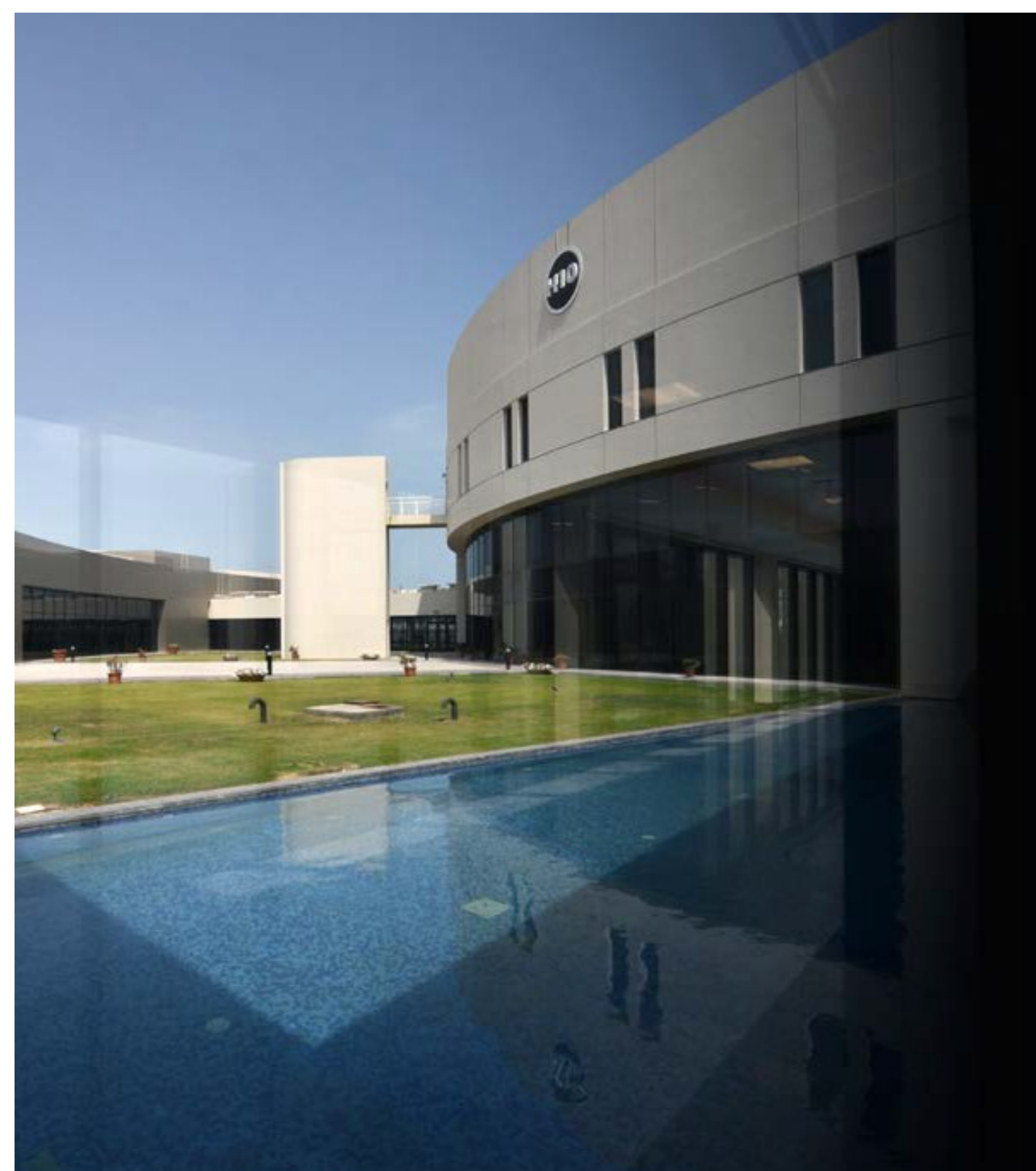
Summer Semester(6 weeks, 3CH)			
Term	Course #	Course Title	Cr Hrs.

Fall	GENC 640	Clinical Practice I	3
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SECOND YEAR (22 credit hours)			
Term	Course #	Course Title	Cr Hrs.
Fall	GENC 620	Advanced Principles of Genetic Counselling	3
	BIOM550	Medical Laboratory Laws and ethics	3
	GENC 650	Clinical Practice II	4
Total			10
Spring	GENC 615	Seminar in Genetic Counselling	1
	GENC 660	Clinical Practice III	4
	GENC 623	Research project	3
		ELECTIVE*	3
	GENC625	Professional Development Exam	0
Total			11

\* List of electives: student can choose 1 course from the courses below:

Course Id.	Course Title	Nb. Credit Hours
PUBH602	Social and Behavioral Science	3
PUBH605	Health Sciences Management and Leadership	3
BIOM530	Current Issues in Clinical Laboratory Sciences	3
BIOM620	Health Informatics	3
GENC 622	Advanced Special Topics in Genetic Counselling.	3



## Human Nutrition Department

Room No. I06 - A1.18

Phone: (+974) 4403-4811

[health@qu.edu.qa](mailto:health@qu.edu.qa)

<https://www.qu.edu.qa/chs/human-nutrition/post-graduate-program>

### Head

Dr. Tahra El Obeid

E-mail: [tahra.e@qu.edu.qa](mailto:tahra.e@qu.edu.qa)

Phone: 4403 4811

### Human Nutrition, Graduate Program Coordinator

Prof. Vijay Ganji

E-mail: [vganji@qu.edu.qa](mailto:vganji@qu.edu.qa)

Phone: 4403 4805

## Master of Science in Human Nutrition

### ABOUT THE PROGRAM

The Human Nutrition Department, College of Health Sciences at Qatar University offers a Master of Science (MSc) degree in Human Nutrition. Students enrolled in this program will undertake advanced course work in the biochemical, clinical, community, and behavioral aspects of nutrition. This program will also offer opportunities for currently employed dietitians and nutritionists to obtain a graduate degree in Nutritional Sciences. The MSc in Human Nutrition in Qatar University will be a two year (4 semester), 36-credit hour program divided into 18 credit hours for each year. Students will complete 24 credit hours of core courses, 6 credit hours of electives, and 6 credit hours of thesis. The core course work in the MSc will be in the areas of advanced biochemical nutrition of macronutrients and micronutrients, statistical and research methods in nutrition, nutrition care management, cardio-metabolic diseases, nutritional epidemiology, and nutrigenomics.

### MISSION

The mission of the MSc degree in Human Nutrition is to maintain a progressive and effective academic program that integrates graduate education, professional experience, research, and public service to develop competent graduates

with the knowledge and skills necessary to satisfy and improve the diet, health, and nutritional needs of the Qatari community and communities of the Gulf region.

### OBJECTIVES

The principle operational objective of the Masters in Human Nutrition is to address the country need for nutritional and dietetic professionals to provide excellent nutrition services and preventive programs according to world-class standards.

The operational objectives the Human Nutrition program are:

1. To meet the requirement of the health institutions in Qatar for Nutritionists and Dietitians with advanced qualifications
2. Prepare competent individuals with higher qualification in nutrition and dietetics who are able to manage nutrition and dietetic services and specialized clinical services
3. To provide qualified staff to meet the country needs for compiling data on nutrition status of the country and implement effective preventive program targeting the emerging nutrition related chronic diseases

### Graduates of this M.Sc. program will:

Graduates of the MSc program in Human Nutrition will

- 1) Apply their advanced knowledge of the metabolic processes related to nutrition in their human and public health practices
- 2) Advance competencies and skills to develop dietetic practice in health settings to meet global standards
- 3) Gain high professional and communication skills to provide professional nutrition counseling and nutrition care to various population groups and individuals at nutrition risks.
- 4) Contribute to nutrition and dietetic research, surveys, and surveillance programs.

### ADMISSION REQUIREMENTS

All applicants to the Master of Science in Human Nutrition program who meet the following minimum criteria will be considered for admission to Qatar University:

- Applicants must have earned a baccalaureate degree from a University or College accredited by an International Accrediting Association or by the Ministry of Higher Education or comparable in that country. An official transcript from each college or university attended as an undergraduate or graduate student must also be submitted. Individuals possessing a baccalaureate degree in nutrition, dietetics or related health fields are eligible to apply.

- Applicants must have an overall undergraduate grade point average (GPA) of 2.8 or more on a 4.0 scale.
- TOEFL (C-based exam) minimum score of 520 or IELTS minimum score of 6 are required of applicants seeking admission taken within 2 years of the start of the intended semester of admission.
- Successful performance in the personal interview with the Admissions committee
- Applicants must provide two letters of recommendation from professors and/or supervisors, submitted to the Head of the Department of Human Nutrition, College of Health Sciences, Qatar University, and sent directly to the department by the recommender.
- Applicants must submit a typed, 300-word personal statement discussing their motivation for seeking a master's degree in view of prior formal education, current job responsibilities, and career plans.
- The application process is coordinated by University admissions and is made on an annual basis. The admission process is competitive and the number of available seats is limited.

### APPLICATION PROCEDURE:

All applicants to the Master of Science in Human Nutrition program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts
- Official TOEFL score report or equivalent score report or other evidence of English proficiency in accordance with QU Policy.
- Two confidential recommendation letters from undergraduate professors or employers
- Curriculum Vitae (C.V.)
- A typed, 300-word personal statement
- Health Certificate
- Photocopy of the applicant's Qatar ID card, If available (Non-Qatari applicants must provide a copy of their passport)
- Two recent passport sized photograph
- Application Fees

Admission to the Master of Science in Human Nutrition program takes place in the fall semester only. For additional information on the program, please see our website at <http://www.qu.edu.qa/students/admission/graduate>

### LEARNING OUTCOMES

Graduates of the Master of Science in Human Nutrition will be able to:

Students shall be able to:

- Apply the knowledge of biochemistry, physiology and genetics to understand the use of nutrients by the human body and in the development of nutrition recommendations for health promotion and disease prevention.
- Evaluate nutritional status using appropriate and advanced clinical assessment strategies and Plan and implement individualized, appropriate medical nutrition therapy for clients
- Understand the socio-cultural, psychological, economical and political factors influencing food choices and nutrition behaviors and Plan, implement, and evaluate nutrition education programs for specific population groups.
- Evaluate the Biochemical mechanism of metabolic and cardio risk factors and implementation strategies in the management of these diseases.
- Design and implement appropriate research methods and nutrition surveys to investigate nutrition problems and nutrition behaviors
- Interpret and prepare professional written reports and oral presentation of research findings appropriately

### POTENTIAL CAREERS

It is expected that around a half or more of our students will be already employed by different health providers such as HMC, MOPH, PHCC and others.

In addition, there are many employment opportunities in the growing Qatari health sector including:

- Hamad General Hospital, Al Khor Hospital, National Center for Cancer Care and Research, Heart Hospital, Al Wakra Hospital, Cuban Hospital, Qatar Rehabilitation Institute, Women's Wellness and Research Center, Ambulatory Care Center, Mental Health Hospital, Surgical Specialized Center, Umm Saeed Hospital, Ras Lafan Hospital, Rumaila Hospital, Enaya, Homecare Services,
- Qatar Military Hospital, Private and public schools, Food catering companies, Qatar University, Private hospitals and clinics e.g. AL Emadi Hospital, Al Ahli Hospital, Doha Clinic Hospital, Sidra Medicine, Ministry of Public Health, Primary Health Care Corporation (PHCC) and Primary Healthcare centers, Qatar Foundation, Qatar Diabetes Association, ASPETAR, ASPIRE, Private Health & Fitness clubs, and Diet centers



## DEGREE REQUIREMENTS

### Master of Science in Human Nutrition

A minimum of 36 credit hours are required to complete the Master of Science in Human Nutrition including the following:

- A minimum of 24 credit hours in Major Core Requirements
- A minimum of 6 credit hours of Electives (chosen with the consultation of program coordinator/thesis supervisor)
- A minimum of 6 credit hours of Thesis
- Passing of thesis defense exam

### Major Requirements (36 CH)

The following courses must be completed by all students in the Master of Science in Human Nutrition program:

### STUDY PLAN

FIRST YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs.
Fall	NUTR 620	Advanced Nutrition	3
	NUTR 601	Advanced Statistics for Nutrition Research	3
	NUTR 640	Nutrition Care Management	3
<b>Total</b>			<b>9</b>
Spring	NUTR 621	Advanced Nutrition	3
	NUTR 631	Research Methods in Human Nutrition	3
	xxx	Elective	3
<b>Total</b>			<b>9</b>

SECOND YEAR (18 credit hours)			
Term	Course #	Course Title	Cr Hrs.
Fall	NUTR 645	Nutrition Epidemiology	3
	NUTR 650	Cardio Metabolic Diseases And Nutrition	3
	NUTR 698	Master's Thesis	3
<b>Total</b>			<b>9</b>
Spring	NUTR 682	Nutrigenomics	2
	NUTR 681	Graduate Seminar	1
	NUTR 698	Master's Thesis II	3
	xxx	Elective	3
<b>Total</b>			<b>9</b>

### Master of Science in Human Nutrition

Course Id.	Course Title	# Credit Hours	# Contact Hours		Prerequisites
			Theory/Discussion	La b.	
NUTR 620	Advanced Nutrition I	3	3	0	-
NUTR 621	Advanced Nutrition II	3	3	0	NUTR 620
NUTR 601	Advanced statistics for nutrition research	3	3	0	-
NUTR 631	Research Methods in Human Nutrition	3	3	0	NUTR 601
NUTR 640	Nutrition Care Management	3	3	0	-
NUTR 645	Nutrition Epidemiology	3	3	0	NUTR 631
NUTR 650	Cardiometabolic Diseases and Nutrition	3	3	0	NUTR 621
NUTR 681	Graduate seminar	1	1	0	NUTR 631
NUTR 682	Nutrigenomics	2	2	0	NUTR 621
NUTR 698	Master's Thesis I	3			NUTR 631
NUTR 698	Master's Thesis II	3			NUTR 698-I
	Electives	6			
	<b>Total</b>	<b>36</b>			

## COLLEGE OF LAW

CBE/LAW Building (I09)

Phone: (974) 4403 5293

Fax: (974) 4403 5253

Email: [law@qu.edu.qa](mailto:law@qu.edu.qa)

Website: [www.qu.edu.qa/law](http://www.qu.edu.qa/law)

### Dean

Dr. Mohammed A. Al – Khulaifi

### Associate Dean for Research and Graduate Studies

Dr. Nisreen Mahasneh

### Associate Dean for Academic Affairs

Dr. Khalid Saleh Al-Shamari

### Assistant Dean for Student Affairs

Aisha Jamal A A AL-Ammari

### Coordinator for Graduate Studies Programs:

Dr. Ayad Haroon

## ABOUT THE COLLEGE

In pursuit of a vision to embed the rule of law in Qatar's development, Decree No. 4 was issued in 1993 to establish an academic center of legal education. As the country's development gathered momentum, the need for expansion in legal education became inevitable, hence the establishment of an autonomous College of Law in 2006.

In about a decade of this bold decision, the College of Law has grown exponentially. The current student population is approximately 800 with faculty strength of 50 highly educated and diverse academics supported by a team of highly motivated administrative staff. A range of programs have been introduced to enrich the curriculum and achieve the college's mission. These include the Center for Law and development to serve as platform for engagement with industry, the Externship program designed to give our students a taste of practical work prior to graduation, a Legal Writing program that advances the writing and research skills of our students, clinics in Domestic Violence, Human Rights, Environment as well as many other initiatives.

Our teaching methods, curricula and research programs have been revamped resulting in over a million dollars in research grants, engagement with the community and industry and the

graduation of high quality students. In tandem with this growth, a new custom multi-purpose building, including a law library and moot courtrooms, is being erected exclusively for the Law College. The college is also poised to start new graduate programs in both Arabic and English. The first two masters programs in Public and Private Law will be in Arabic. These graduate programs are expected to add a new dimension to our work and take the college to a new level..

The mission of the college is to provide students with the highest standards of legal education and skills for professional success. This is one reason why the selection process of the Masters programs is very rigorous. In the end, those privileged to be admitted to the program can expect to receive a dynamic academic and professional training experience.

## DEGREE OFFERINGS

The College of Law offers the following graduate degree programs:

- Master of Law in Public Law
- Master of Law in Private Law
- Graduate Certificate in Legal Studies

Ph.D. in Law

- Private law
- Public Law
- Public International Law in English

COLLEGE OF LAW BUILDING (I09)

Phone: (974) 4403 5293

Fax: (974) 4403 5253

Email: [law.graduate@qu.edu.qa](mailto:law.graduate@qu.edu.qa)

Website: [www.qu.edu.qa/law/program/graduate/public-law](http://www.qu.edu.qa/law/program/graduate/public-law)

## ABOUT THE MASTER PROGRAM

The Master of Law in Public Law includes a total of 33 credit hours. Students are expected to complete the program degree requirements in 2 academic years. The program is full-time, based on face-to-face lecture delivery with the assistance of classroom technology. All lectures will be delivered on campus in the evening from 18.00 to 21.00. Course lectures will be delivered once a week during weekdays. As per QU rules, a mixed section will be opened for both Male and Female students. Arabic is the language of instruction.

## MISSION

The mission of the Master in Public Law program is to provide a high level of legal understanding concerning the key pillars of the law and a fundamental understanding of specialty areas by offering a wide range of courses in public law. The program is committed to graduate students who possess the highest academic standards, the necessary values to meet society's needs in legal practice and research, and a commitment to professional and ethical conduct. The program also aims to enhance the level of competency of public law practitioners, whether they be judges or civil servants.

The Master in Public Law will be in line with Qatar's vision as a country that promotes and adheres to the rule of law. The program will provide society with graduates capable of offering professional legal consultations in the areas of public law, in addition to working as legislators competent to draft new laws. Additionally, the program will meet the needs of the diplomatic sphere by graduating students who are well aware of the legal aspects of international relations and interstate dispute resolution techniques.

## OBJECTIVES

The Master of Law in Public Law has the following objectives:

1. To provide an advanced and focused program to students looking to specialize in particular fields of law.
2. To enable students to have more advanced knowledge and critical thinking abilities of public law related subjects.
3. To prepare exceptional students for possible academic careers.
4. To provide students with the professional skills needed for senior governmental and professional roles.
5. To develop students' research abilities, and to conduct research independently in public law related subjects.
6. To ensure that the College of Law becomes a competitive educational and research institute within the region.

## ADMISSION REQUIREMENTS

All applicants to the Master of Law in Public Law program who meet the following minimum criteria will be considered for admission to Qatar University:

- Completed a bachelor's degree in law from Qatar University or in a law related field from another university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country with a minimum cumulative GPA of 2.80 out of 4.00 or its equivalent.
- Applicants graduating from universities other than Qatar University will need to pass an equivalency evaluation by an ad-hoc committee that stands for this purpose.

- A satisfactory performance in the personal interview with the Admission Committee.

All applicants to the master's in public law program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions application
- Final, official and certified university transcripts
- A personal statement (motivation letter)
- Two confidential letters of recommendation
- Curriculum Vitae (C.V.)
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application Fees

## LEARNING OUTCOMES

1. Discuss and explain the key concepts and principles of related branches and segments of public law.
2. Utilize rules and provisions of a particular contemporary subject that relates to branches of public law.
3. Apply knowledge to perform problem-solving techniques that relate to branches of public law.
4. Analyze and evaluate legal provisions and judicial rulings that relate to branches of public law.
5. Conduct comparative legal research between the laws of Qatar and the laws of other nations.
6. Conduct high quality research in related areas of public law.

## OPPORTUNITIES

Graduates of the Master of Law in Public Law have a number of opportunities.

These include public service in the governmental and non-governmental sectors;

Private practice of the law as well as academic career opportunities.

## GRADUATION REQUIREMENTS

The graduation requirements are in line with QU requirements. An academic degree is awarded to students who complete all the requirements of the graduate program in which he/she is enrolled with a minimum cumulative GPA of 3.00 for Masters.

## DEGREE REQUIREMENTS

A minimum of 33 credit hours are required to complete the Master of Law in Public Law, including the following:



- A minimum of 18 credit hours in Major Requirements
  - A minimum of 9 credit hours in Major Electives
  - A minimum of 6 credit hours in Thesis Requirements
- Passing thesis defense exam

### Major Requirements (18 CH)

Students must complete 18 CH from the courses listed below:

- PULW 510 Comparative Studies of the General Theory of Crime
- PULW 510 Comparative Criminal Procedure Law
- PULW 515 Comparative Constitutional Law
- PULW 511 Comparative Administrative Law
- PULW 512 Advanced Studies in Public International Law
- PULW 800 Principles and Skills of Legal Research

### Major Electives (9 CH)

Student must complete 9 CH from the courses listed below:

- PULW 811 Fundamental Rights and Freedoms
- PULW 812 Administrative Contracts
- PULW 813 Cyber Crimes
- PULW 814 Cross-Border Organized Crimes
- PULW 815 The Law of International Responsibility
- PULW 816 Peaceful Settlement of Inter-State Disputes
- LAWD-805 Information Technology Crimes
- LAWD-806 Law of International Organizations

### Thesis Requirements (6 CH)

Students must complete the following course:

- PULW 690 Thesis

### STUDY PLAN

FIRST YEAR ([9 ] credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	PULW800	Principles and Skills of Legal Research	3
	PULW515	Comparative Constitutional law	3
		Elective course	3
Total			9

Spring	PULW 512	Advanced Studies of Public International Law	3
	PULW 510	Comparative Studies of the General Theory of Crime	3
		Elective course	3
Total			9

SECOND YEAR ([ 9 ] credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	PULW510	Comparative Criminal Procedure Law	3
	PULW511	Comparative Administrative Law	3
		Elective course	3
Total			9
Spring			
	PULW690	Thesis	6
Total			6

## Master of Law in Private Law

COLLEGE OF LAW BUILDING (109)

Phone: (974) 4403 5293

Fax: (974) 4403 5253

Email: [law.graduate@qu.edu.qa](mailto:law.graduate@qu.edu.qa)

Website: [www.qu.edu.qa/law/program/graduate/private-law](http://www.qu.edu.qa/law/program/graduate/private-law)

### ABOUT THE PROGRAM

The program includes a total of 33 credit hours. Students are expected to complete the program degree requirements in 2

academic years. The program is full time, based on face-to-face lecture delivery with the assistance of classroom technology. All lectures will be delivered on campus in the evening from 18.00 to 21.00. Course lectures will be delivered once a week during weekdays. As per QU rules, a mixed section will be opened for both Male and Female students. The language of instruction is Arabic.

### MISSION

The mission of the Master in Private Law program is to provide a high level of legal understanding of the key pillars of the law and a fundamental understanding of specialty areas by offering a wide range of courses in private law.

The program is committed to graduate students who possess the highest academic standards, the necessary values to meet society's needs in legal practice and research, and a commitment to professional and ethical conduct. The program also aims to enhance the level of competency of private law practitioners, whether they be judges or civil servants.

### OBJECTIVES

The College of Law at Qatar University is the sole provider of specialized legal education in the state of Qatar, and is well placed to clearly and boldly build a graduate program founded on its unique mission to contribute effectively to Qatari society and its development.

The objectives of the new program are as follows:

1. To provide an in-depth and focused program to students looking to specialize in particular fields of law.
2. To enable students to have more advanced knowledge and critical thinking abilities of related subjects.
3. To prepare exceptional students for possible academic careers.
4. To provide students with the professional skills needed for senior governmental, business or professional roles.
5. To develop students' research abilities and to conduct research independently in private law-related subjects.
6. To ensure that the College of Law becomes a competitive education and research institute within the region.

### ADMISSION REQUIREMENTS

All applicants to the Master of Law in Private Law program who meet the following minimum criteria will be considered for admission to the program:

- Completed a Bachelor degree in Law from Qatar University or in a law related field from another university or college accredited by an international accrediting association or by the Ministry of Higher

Education or equivalent in that country with a minimum cumulative GPA of 2.80 out of 4.00 or its equivalent.

- Applicants graduating from other universities will need to pass an equivalency evaluation by an ad-hoc committee that stands for this purpose.
- A satisfactory performance in the personal interview with the Admission Committee.

All applicants to the Master in Private Law program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts
- A personal statement (motivation letter)
- Two confidential letters of recommendation
- Curriculum Vitae (C.V.)
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application Fees:

### LEARNING OUTCOMES

1. Discuss and explain the key concepts and principles of related branches of private law.
2. Utilize rules and provisions of a particular contemporary subject that relates to branches of private law.
3. Apply knowledge to perform problem solving technics that relate to branches of private law.
4. Analyze and evaluate legal provisions and judicial rulings that are related to branches of private law.
5. Operate a comparative legal research between Qatar laws and other national laws.
6. Conduct high quality research in related areas of private law.

### OPPORTUNITIES

This is the first graduate program in law in Qatar. Consequently, the opportunities available to the graduates of the program are numerous. It is higher than LLB and JD and offers more in-depth study and specialization.

Graduates will find relatively easy employment and career enhancement opportunities in the industry, private law firms and government institutions.

Careers in academia are also facilitated by the program.

### DEGREE REQUIREMENTS

A minimum of 33 credit hours are required to complete the Master of Law in Private Law, including the following:

- A minimum of 18 credit hours in Major Requirements
  - A minimum of 9 credit hours in Major Electives
  - A minimum of 6 credit hours in Thesis Requirements
- Passing thesis defense exam.

### Major Requirements (18 CH)

Students must complete 18 CH from the courses listed below:

- PRLW 510 Advanced Studies in Civil Law
- PRLW 512 Comparative Civil Law
- PRLW 611 Sources of Legislation in Islamic Sharia
- PRLW 511 Advanced Studies in Commercial Law
- PRLW 610 Practical Studies in Law of Civil
- Procedures
- PRLW 800 Principles and Skills of Legal Research

### Major Electives (9 CH)

Student must complete 9 CH from the courses listed below:

- PRLW 817 Insurance Contracts
- PRLW 818 Civil Liability of Professionals
- PRLW 819 International Construction Contracts
- PRLW 820 Conflict of Laws in International Contracts
- PRLW 821 International Banking Transactions
- PRLW 822 Commercial Concern
- PRLW 823 Contemporary Issues in Corporate Law
- LAWD-807 Islamic Finance
- LAWD-808 Means of Settling Disputes

### Thesis Required courses (6 CH)

Student must complete the following course:

- PRLW 690 Thesis

### STUDY PLAN

FIRST YEAR ([9 ] credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	PRLW-510	Advanced Studies in Civil Law	3
	PRLW-513	Principles and Skills of Legal Research	3
		Elective course	3
Total			9
Spring	PRLW-512	Comparative Civil Law	3

	PRLW-511	Advanced Studies in Commercial Law	3
		Elective course	3
Total			9

SECOND YEAR ([ 9 ] credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	PRLW-610	Practical Studies in Law of Civil Procedures	3
	PRLW-611	Sources of Legislation in Islamic Sharia	3
		Elective course	3
Total			9
Spring	PRLW-690	Thesis	6
Total			6

## Graduate Certificate in Legal Studies (Non-

## Academic)

COLLEGE OF LAW BUILDING (I09)

Phone: (974) 4403 5293

Fax: (974) 4403 5253

Email: [law.graduate@qu.edu.qa](mailto:law.graduate@qu.edu.qa)

Website: [www.qu.edu.qa/law/program/graduate/graduate-certificate](http://www.qu.edu.qa/law/program/graduate/graduate-certificate)

### ABOUT THE PROGRAM

Graduate Certificate in Legal Studies program aims at (1) LL.B. graduates wishing to enhance further their knowledge and skills, and (2) a select number of students seeking to pursue graduate studies in law but would otherwise be ineligible under the admission criteria of the existing LL.M. programs. The Graduate Certificate program will offer two types of

concentrations: (1) Public Law Concentration and (2) Private Law Concentration. Upon completion of the program, students will receive a non-academic diploma.

The Graduate Certificate in Legal Studies is specifically designed to facilitate the progression of students into the Master of Public or Private Law. Students will be required to attain a GPA of 3.5 in the Graduate Certificate in order to be granted admission to either stream of the LL.M Program as consistent with the concentration in the certificate program. The Graduate Certificate program will, therefore, enhance the existing LL.M. programs by allowing students who have demonstrated success in graduate studies, to join the LL.M. program, while concurrently providing an alternative means for pursuing graduate studies for LL.B. holders seeking a non-degree option for career specific purposes.

### EDUCATIONAL GOALS OF THE PROGRAM

The educational goals of the Program are:

1. To enable students to acquire advanced knowledge in the core areas of Public or Private Law.
2. To imbue students with a broad understanding of the different fields of Public or Private Law.
3. To develop critical thinking and problem identifying/solving skills in the context of advanced legal studies.
4. To equip students with the professional skills needed for further study or governmental and business or professional roles.
5. To enhance the capabilities of students to conduct legal research

### ADMISSION REQUIREMENTS

All applicants to the Graduate certificate in legal studies program who meet the following minimum criteria will be considered for admission to the program:

- Completed a bachelor's degree in law from Qatar University or in a law related field from another university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country with a minimum cumulative GPA of 2.30 – 2.79 out of 4.00 or its equivalent.
- Applicants graduating from other universities will need to pass an equivalency evaluation by an ad-hoc committee that stands for this purpose.
- A satisfactory performance in the personal interview with the Admission Committee.

All applicants to the Graduate certificate in legal studies program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts
- A personal statement (motivation letter)
- Two confidential letters of recommendation
- Curriculum Vitae (C.V.)
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application Fees:

### CURRICULUM

The Graduate Certificate in Legal Studies program would offer courses already offered in the College of Law's existing LL.M. programs in Public and Private Law. To receive the Graduate Certificate, students must complete a total of 12 credit hours within one year and no longer than two years. Of the 12 credit hours, 3 credit hours must consist of the mandatory Principles and Skills of Legal Research course, and nine (9) credit hours of elective course in the respective concentration.

In the first semester, students must take 3 credit hours of the mandatory Principles and Skills of Legal Research course, and may choose 3 credits from the following:

For **Public Law Concentration:**

Constitutional Comparative Law, Administrative Contracts, or Law of International Responsibility offered in the LL.M. in Public Law;

For **Private Law Concentration:**

Advanced Studies in Civil Law, Professional Civil Liability, or Commercial Concern offered in the LL.M. in Private Law.

In the second semester, students may choose 3 credits from the following:

For **Public Law Concentration:**

Comparative Studies in the General Theory of Crime, Advanced Studies in Public International Law, Cybercrimes, or Fundamental Rights and Freedoms.

For **Private Law Concentration:**

Comparative Civil Law, Advanced Studies in Commercial Law, Contemporary Studies in commercial Companies Law, or Conflict of Laws in International Contracts.



## Doctor of Philosophy in Law

General Information:

PROGRAM TITLE: DOCTOR OF PHILOSOPHY (Ph.D.)

TITLE OF MAJOR: LAW

CONCENTRATION: (Language of instruction in parenthesis)

- Public Law (Arabic)
- Private Law (Arabic)

International Law (English)

NAME OF DEPT: Graduate Studies Office

NAME OF COLLEGE: College of Law

PROGRAM LENGTH: Three (3) years

### MISSION

The Mission of the Ph.D. in Law Program at Qatar University College of Law is:

To prepare graduate students to become effective university teachers and research scholars or senior researchers who significantly make a difference in Qatar and beyond.

The Ph.D. in Law program will help in providing well-prepared leaders, educators, law researchers, and professional contributors to society who are empowered with the latest knowledge, skills, and tools. The program is intended to accommodate all fields of law, and utilize interdisciplinary and international collaborations to enrich the learning experience.

### OBJECTIVES

The educational objectives for the Ph.D. in Law program are:

1. Train students to become research scholars;
2. Provide students an opportunity to deepen and enhance their knowledge of certain areas of law; and
3. Develop students with intellectual initiative, independence, and contribute original ideas to existing literatures.

The program achieves its objectives through rigorous teaching and research that contribute to the advancement of knowledge and practice. The education objectives were created by benchmarking other Ph.D. in Law programs such as the University of Washington's School of Law Ph.D. in Law program.

### ADMISSION REQUIREMENT

Admission to the Ph.D. in Law program takes place in the fall semester only. The application deadline for is in Spring semester as specified by the University. For full consideration, all materials must be received upon the specified deadline.

All applicants to the Ph.D. in Law program holding a Bachelor of Laws (LL.B.) and a Master of Laws (LL.M.) degree and meet the following minimum criteria will be considered for admission:

- Completed a Bachelor of Laws degree from a university accredited by the Ministry of Education and Higher Education with a minimum Grade Point Average (GPA) of 3.0 on a 4.00 scale OR GPA (out of 4.00 )
- Completed a Master of Laws degree from a university accredited by the Ministry of Education and Higher Education with a minimum Grade Point Average (GPA) of 3.0 on a 4.00 scale OR GPA (out of 4.00 )
- Written educational goals or Personal Statement;
- Demonstrated success in research;
- For the International Law Concentration, achieved a minimum score of 550 on the paper-based TOEFL or equivalent test taken within 2 years of the start of the intended semester of admission, OR earned a previous degree from an accredited institution of higher education in a Program where English was the language of instruction.
- A satisfactory performance in the personal interview
- Successful completion of a written short essay conducted during the personal interview.

All applicants to the Ph.D. in Law program holding a Juris Doctor (J.D.) degree and meet the following minimum criteria will be considered for admission:

- Completed a Juris Doctor (J.D.) degree from a university accredited by the Ministry of Education and Higher Education with a minimum Grade Point Average (GPA) of 3.0 on a 4.00 scale OR GPA (out of 4.00).
- Successfully complete the non-credit courses of the Bridging Program. The Bridging Program offers applicants holding a J.D. degree a conditional admission to the Ph.D. in Law program subject to completing 9 hours of non-credit courses from a Master of Laws program offered at the College of Law with the same language of instruction as the Ph.D. in Law concentration applied for. The Bridging Program in the English language will be initiated upon the subsequent commencement of the LL.M. in International Business Law.
- The 9 non-credit hours shall consist of three (3) courses from the following four (4) courses:
- For Public Law or Private Law Concentrations (in Arabic): a) Comparative Civil Law (PRLW-512, in Arabic), b) Advanced Studies in Commercial Law (PRLW511, in Arabic), c) Private Rights and Liberties (PULW-550 – in

Arabic), and d) Comparative Criminal Law (PULW510, in Arabic)

The 9 non-credit hours shall be completed within one or two semesters prior to applying for full admission to the Ph.D. in Law program. The student must receive a grade of 3.0 and above on each course. Upon satisfactory completion of the 9 non-credit hours, the student shall be given full acceptance into the Ph.D. in Law program.

- Written educational goals or Personal Statement;
- Achieved a minimum score of 550 on the paper-based TOEFL or equivalent test taken within 2 years of the start of the intended semester of admission, OR earned a previous degree from an accredited institution by the Ministry of Education and Higher Education in a Program where English was the language of instruction.
- A satisfactory performance in the personal interview.
- Successful completion of a written short essay conducted during the personal interview.

All applicants to the Ph.D. in Law program are also required to submit the following documents to the Admissions Department:

- Completed Online Admissions Application
- Final, official and certified university transcripts
- Evidence of English Proficiency according to QU Policy (if the student choose the international law concentration).
- Three recommendation letters. At least two of these letters must be from Faculty Members

Educational Objectives or Personal Statement (Essays)

- Curriculum Vitae (C.V.)
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application Fee

### LEARNING OUTCOMES

After benchmarking the learning outcomes in ABA Section 302 and other Ph.D. in Law programs in Europe and the region, a set of learning outcomes were determined using a previous study by Jurfhorsk (Arhaus University in Denmark), which sets high and uniform Ph.D. in Law programs in Denmark, and which identified learning outcomes by benchmarking other Ph.D. in Law Programs.

Upon completing the requirements of the Ph.D. in Law program, the student will have mastered the following learning outcomes (SLOs):

1. Demonstrate an understanding of and apply legal research and legal analysis methodologies and techniques within a specific field of legal research.
2. Evaluate legal materials from different knowledge resources, including legal information systems.
3. Articulate and convey ideas and arguments to a range of audiences and in a variety of context.
4. Ability to work independently and analyze one's own findings and those of others.

### OPPORTUNITIES

Students with a Ph.D. in Law will have excellent employment opportunities in Qatar and abroad. A career in academe within the State of Qatar or in the region is highly likely given the demand for faculty in all legal disciplines within regional law schools. Graduates will also be sufficiently capable of pursuing a career as a legal researcher in one of the law disciplines either by conducting consulting work, or as a lawyer who is equipped with advanced knowledge. As we are witnessing the planned growth in all aspects in the country, there will be a need for more graduates in all legal disciplines. An example is the continuing need for new law faculty at the College of Law because of the rapid increase in student enrollments. Additionally, the opening of advanced law programs in other institutions like Hamad Bin Khalifa University have and will continue to create employment opportunities for graduates with a Ph.D. in Law. Additionally, given the significant proportion of GDP invested in research, new opportunities continue to abound. The graduates of the Ph.D. in Law program will be the human capital supporting the knowledge-based economy being fostered in Qatar. It will be this generation that will staff the institutions and research centers that will develop the Qatari society and economy.

### GRADUATION REQUIREMENTS

The Ph.D. in Law program requires student to successfully complete the following requirements to be eligible for graduation:

1. Completion of a minimum of 60 credit hours, including a minimum of 48 credit hours for dissertation and 12 credit hours of course work.
2. The 12 credit of course work must consist of required and elective course work as described in the study plan for the Ph.D. in Law program with a minimum GPA of 3.0 on a scale of 4.0
3. Pass the Comprehensive Written Exam at the end of the second semester of study and no later than the third semester of study.
4. Pass a Candidacy Examination at the end of the fourth semester of study.
5. Successfully write (in Arabic or English, depending on the concentration's language of instruction) a Dissertation supervised by a QU faculty member with Graduate Faculty Supervisory Status.

- Successfully defend the submitted and approved written Dissertation during a Dissertation Defense (in Arabic or English, depending on the concentration's language of instruction) in the terminal semester.
- Present in at least one (1) conference and publish at least two (2) research articles in one of the accredited journals by the College of Law prior to filing for graduation (student must register for and submit a student ORCID # with the Supervisory Committee Appointment Form).
- The student is expected to file a dissertation and pass the defense of the dissertation within six (6) years of first registering in the program.

### DEGREE REQUIREMENTS

The program curriculum for a Doctor of Philosophy in Law (Ph.D. in Law) at Qatar University College of Law consists of eight (8) components:

- Required Course on Research Methods and Advanced Dissertation Writing (3 credit hours)
- Required Course on Comparative Legal Systems (3 credit hours)
- Required Concentration Course (3 credit hours)
- Elective Course (3 credit hours)
- Comprehensive Examination (0 credit)
- Candidacy Examination (0 credit)
- Dissertation (48 credit hours)
- Dissertation Defense (0 credits)

FIRST YEAR ([9 ] credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	PRLW-510	Advanced Studies in Civil Law	3
	PRLW-513	Principles and Skills of Legal Research	3
	xxx	Elective course	3
Total			9
Spring	PRLW-512	Comparative Civil Law	3
	PRLW-511	Advanced Studies in Commercial Law	3
	xxx	Elective course	3
Total			9

### Ph.D. in Law (Public Law – Arabic)

Course Id.	Course Title	Nb. Credit Hours	Nb. Theo.	Nb. Lab.	Prerequisites	Co-Requisites	New Course (Yes/ No)
LAWD802	Public Economic Law	3	3				Yes

### Ph.D. in Law (Private Law – Arabic)

Course Id.	Course Title	Nb. Credit Hours	Nb. Theo.	Nb. Lab.	Prerequisites	Co-Requisites	New Course (Yes/ No)
LAWD803	Comparative Contract Law	3	3				Yes

### STUDY PLAN

Students must take a total of 6 credits from the following Required Research Courses:

Course Id.	Course Title	Nb. Credit Hours	Nb. Theo.	Nb. Lab.	Prerequisites	Co-Requisites	New Course (Yes/ No)
LAWD800	Comparative Legal Systems	3	3				Yes
LAWD801	Legal Research Methods and Advanced Writing Skills for Dissertation	3	3				Yes

Students must take 3 credit hours from the following Required Concentrations Courses, according to their concentration:

### Ph.D. in Law (International Law – English)

Course Id.	Course Title	Nb. Credit Hours	Nb. Theo.	Nb. Lab.	Prerequisites	Co-Requisites	New Course (Yes/ No)
LAWD804	International Dispute Settlement	3	3				Yes

Students must take 3 credit hours from the following Elective Courses, according to their concentration:

### Ph.D. in Law (Public Law – Arabic)

Course Id.	Course Title	Nb. Credit Hours	Nb. Theo.	Nb. Lab.	Prerequisites	Co-Requisites	New Course (Yes/ No)
LAWD805	Cyber Crimes	3	3				Yes
LAWD806	Law of International Organizations	3	3				Yes

### Ph.D. in Law (Private Law – Arabic)

Course Id.	Course Title	Nb. Credit Hours	Nb. Theo.	Nb. Lab.	Prerequisites	Co-Requisites	New Course (Yes/ No)
LAWD807	Islamic Finance	3	3				Yes
LAWD808	Alternative Dispute Resolution	3	3				Yes

### Ph.D. in Law (International Law – English)

Course Id.	Course Title	Nb. Credit Hours	Nb. Theo.	Nb. Lab.	Prerequisites	Co-Requisites	New Course (Yes/ No)
LAWD809	International Law of the Sea	3	3				Yes
LAWD810	International Investment Law and Business Transactions	3	3				Yes

Required for all Ph.D. in Law students:

Course Id.	Course Title	Nb. Credit Hours	Nb. Theo.	Nb. Lab.	Prerequisites	Co-Requisites	New Course (Yes/ No)
LAWD 990	Doctoral Dissertation	48	48		LAWD 800, LAW D 801		Yes
LAWD 991	Comprehensive Examination	0					Yes
LAWD 992	Candidacy Examination	0					Yes
LAWD 999	Dissertation Defense	0			LAWD 990		Yes



## COLLEGE OF PHARMACY

Ibn Bitar Building

Phone: (974) 4403-5553 / 5554

Email: [pharmacy@qu.edu.qa](mailto:pharmacy@qu.edu.qa), [mscpharm@qu.edu.qa](mailto:mscpharm@qu.edu.qa),  
[pharmd@qu.edu.qa](mailto:pharmd@qu.edu.qa)

Website: [www.qu.edu.qa/pharmacy/](http://www.qu.edu.qa/pharmacy/)

### Dean

Dr. Mohammad Diab

### Associate Dean for Academic Affairs

Dr. Maguy ElHajj

### Head of Research and Graduate Studies

Dr. Fatima Mraiche

### Assistant Dean for Student Affairs

Dr. Alla El-Awaisi

### ABOUT THE COLLEGE

The mission of the College is to prepare our students to provide optimal pharmaceutical care and advance health care outcomes, to promote research and scholarly activity, and to serve as a pharmacy resource for Qatar, the Middle East and the world. Our vision is to be the leading pharmacy school in the Middle East region. The specific goals of the program are:

1. To foster integration of knowledge and skills, and to develop our students' general and professional abilities in a systematic ability-based curricula.
2. To integrate knowledge with practical experience to enhance the career path and development.
3. To contribute to the professional education of practitioners.
4. To advance pharmaceutical and health outcomes by the conduct of internally and externally funded independent and collaborative research.
5. To provide an intellectual and academic atmosphere that is conducive to recruitment and development of qualified faculty.

### DEGREE OFFERINGS

Qatar University offers two types of postgraduate degrees: (1) Master in Pharmacy: A research-oriented degree culminating in a research-based experience typically in the form of a thesis and (2) PharmD: a professional Master's degree, which is practical in nature and emphasizes professional knowledge beyond the baccalaureate degree.

The College of Pharmacy offers the following graduate degree programs:

1. Master of Science in Pharmacy (Research Track)
2. Doctor of Pharmacy (PharmD) (Professional Track)

### MASTER OF SCIENCE IN PHARMACY

Ibn Bitar Building (I06)

Phone: (974) 4403-5556

Email: [mscpharm@qu.edu.qa](mailto:mscpharm@qu.edu.qa)

### Website:

<http://www.qu.edu.qa/pharmacy/academics/postgraduate/MSc-in-pharmacy/index.php>

### Head

Dr. Fatima Mraiche

### ABOUT THE PROGRAM

The Master of Science in Pharmacy (MSc (Pharm)) degree program is a two-year minimum 33 credit-hour post-baccalaureate thesis-based research-oriented graduate studies program designed to build on the undergraduate degree experience and further enhance critical thinking and research skills. The MSc (Pharm) degree program will also prepare students who wish to pursue a future Doctor of Philosophy (PhD) degree.

Graduate students specialize in one of the Pharmaceutical Sciences and Clinical Pharmacy & Practice research focus areas represented in our college including pharmacognosy, medicinal chemistry, pharmacology, pharmacokinetics, pharmaceuticals, pharmacy practice, clinical pharmacy, social & administrative pharmacy & pharmacoconomics. This list will expand in parallel with our faculty recruitment. The scope of the degree will include any aspect of the discovery, development, analysis and use of medicines to improve health care and related outcomes.

### OBJECTIVES

The Master of Science in Pharmacy aims to:

- Provide an opportunity for students to advance their knowledge, skills and attitudes in special areas of interest within the pharmaceutical sciences, clinical pharmacy and pharmacy practice.
- Prepare students for research teaching and specialty positions requiring personnel with a strong background in these specialty areas.

- Develop students with the research skills needed to carry out basic and applied studies.

### LEARNING OUTCOMES

Graduates of the Master of Science in Pharmacy will be able to:

- Apply advanced knowledge and critical thinking skills required to master, generate, interpret and disseminate pharmaceutical knowledge.
- Work collaboratively with others within and external to the profession for the purpose of dissemination and extension of knowledge in pharmaceutical sciences, clinical pharmacy and pharmacy practice.
- Communicate with diverse audiences in written and spoken English, using a variety of strategies that take into account the situation, intended outcomes of the communication and the target audience.
- Honor their roles as future pharmaceutical scientists through the fulfillment of their obligations to the profession, the community, and the society, in accordance with the vision, mission and goals of the College of Pharmacy.
- Conduct themselves in a manner that demonstrates an understanding and adherence to the principles of scholarly integrity and ethical research.

### OPPORTUNITIES

There will be many employment opportunities for graduates of this program within Qatar, the region and elsewhere. Potential employers in Qatar include pharmaceutical industry (e.g. research scientists with a future local biotech company or a branch of a multinational corporation), biomedical research institutions (e.g. research scientist at Sidra Biomedical Research or Qatar Science and Technology), drug regulation (e.g. pharmaceutical product analysis at Supreme Council for Health), patient care (Hamad Medical Corporation and affiliates), ADL-Q, Health authorities, hospital setting and all patient health sectors and others.

Employment opportunities for graduates of the Master of Science in Pharmaceutical Sciences are available in academic institutions, governmental regulatory authorities, hospital and clinic settings, quality assurance and research and development in the pharmaceutical industry and in research laboratories in government and non-government organizations.

### ADMISSION REQUIREMENTS

The admission process for the MSc (Pharm) degree program is designed to ensure the best and brightest candidates are admitted to our program. Acceptance into the MSc (Pharm) degree program is by a competitive application process. Only

complete applications will be considered by the MSc (Pharm) Degree Program Admissions Committee.

The full-time study plan for the MSc (Pharm) degree program is open to BSc degree holders from recognized domestic and international colleges and schools.

All national and international female and male applicants to the MSc (Pharm) degree program who meet the following minimum criteria will be considered for admission to Qatar University:

- Completed a 5-year BSc or equivalent degree in pharmacy, chemistry, biology, biomedical sciences, human nutrition, chemical engineering or related field from a faculty, school or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country;
- Graduated with a minimum cumulative grade point average (GPA) of 2.8 out of 4.0;
- Achieved a minimum score of 520 on the paper-based TOEFL (or equivalent) assessment and 6 on IELTS;
- Sufficient preparatory academic background to carry out graduate work in the chosen field (students holding a BSc degree in a discipline other than pharmacy will be required to complete bridging course(s) based on the decision of the college Admissions Committee);
- A satisfactory performance in the personal interview (by invitation) as conducted by the college Admissions Committee.

The application process for this degree program is coordinated by the Qatar University Admissions Department. For more information, please see: [Apply to QU | Qatar University](#)

All applicants to the Master degree program (MSc Pharm) program are required to submit the following documents to the Admissions Department:

- [Online Admission Application](#)
- Official, final and authenticated academic transcripts from all post-secondary educational institutions
- Official and final TOEFL or IELTS English proficiency results or English waiver
- Curriculum Vitae (C.V.);
- Personal statement describing why you wish to pursue this degree (1000 words maximum, English only, copy/paste into your online application form);
- Three letters of recommendation from undergraduate professors or employers (send [DOC](#) or [PDE](#) form to referee, request they follow instructions on form and ensure form is received as email attachment by our office before the application deadline);
- Health Certificate

- Photocopy of the applicant's Qatar ID card (Applicants from outside Qatar should provide a copy of their passport);
- Passport photographs (2 copies within past 2 years);
- QAR 350 application fee.

## DEGREE REQUIREMENTS

### Master of Science in Pharmaceutical Sciences

A minimum of 33 credit hours are required to complete the Master (Pharm) degree program, including the following:

- A minimum of 14 credit hours in Core Requirements.
- A minimum of 6 credit hours of Discipline-specific Package.
- A minimum of 10 credit hours in the Thesis Package.
- A minimum of 3 credit hours in Major Electives.
- Passing thesis defense exam

### Core Requirements (14 credit hours)

- PHAR 620 Research Design, Ethics and Statistical Methodology I
- PHAR 621 Research Design, Ethics and Statistical Methodology II
- PHAR 625 Life Cycle of Medication: From Discovery to Market Withdrawal
- PHAR 640 Graduate Seminar I
- PHAR 641 Graduate Seminar II
- PHAR 642 Graduate Seminar III
- PHAR 643 Graduate Seminar IV
- PHAR 650 English-Based Communication Skills for Graduate Students
- PHAR 660 Directed Studies in Pharmaceutical Sciences

### Discipline-Specific package (6 credit hours)

Students must complete a minimum of 6 credit hours in courses that are discipline-specific:

- PHAR 670 Advanced Topics in Pharmaceutical Sciences I
- PHAR 671 Advanced Topics in Pharmaceutical Sciences II

### Major Electives (3 credit hours)

Students must complete a minimum of 3 credit hours in Major Elective courses:

- PHAR 680 Elective in Pharmaceutical Sciences

### Thesis package (10 credit hours)

Students must complete a minimum of 10 thesis credit hours:

- PHAR 690 MSc (Pharm) Thesis

- PHAR 691 MSc (Pharm) Thesis

## MSC (PHARM) STUDY PLAN

FIRST SEMESTER (10 credit hours)			
Term	Course	Course Title	Cr Hrs
Fall	PHAR 620	Research Design, Ethics and Statistical Methodology I	2
	PHAR 625	Life Cycle of Medication: From Discovery to Market Withdrawal	2
	PHAR 640	Graduate Seminar I	1
	PHAR 650	English-Based Communication Skills for Graduate Students	2
	PHAR 670	Advanced Topics in Pharmaceutical Sciences I	3
Total			10

SECOND SEMESTER (11 credit hours)			
Term	Course	Course Title	Credit Hours
Spring	PHAR 621	Research Design, Ethics and Statistical Methodology II	2
	PHAR 641	Graduate Seminar II	1
	PHAR 660	Directed Studies in Pharmaceutical Sciences	2
	PHAR 671	Advanced Topics in Pharmaceutical Sciences II	3

	PHAR 680	Elective in Pharmaceutical Sciences	3
Total			11

THIRD SEMESTER (6 credit hours)			
Term	Course	Course Title	Credit Hours
Fall	PHAR 642	Graduate Seminar III	1
	PHAR 690	MSc (Pharm) Thesis	5
Total			6

FOURTH SEMESTER (6 credit hours)			
Term	Course	Course Title	Credit Hours
Spring	PHAR 643	Graduate Seminar IV	1
	PHAR 691	MSc (Pharm) Thesis	5
Total			6

## Doctor of Pharmacy (PharmD) Program

College of Pharmacy Building (I06)

Phone: (974) 4403-5558

Email: [pharmd@qu.edu.qa](mailto:pharmd@qu.edu.qa)

Website: <https://www.qu.edu.qa/pharmacy/departments/programs/doctor-of-pharmacy>

### Director

Bridget Javed

## ABOUT THE PROGRAM

The Doctor of Pharmacy (PharmD) program is designed to prepare promising BScPharm graduates for a fulfilling career in advanced clinical pharmacy practice, research and academia. The program admits students on a full-time basis.

## OBJECTIVES

The PharmD program is designed to meet international standards for an advanced degree in the health sciences field. It involves post-baccalaureate study designed to build on the knowledge, skills, attitudes and values developed during the undergraduate degree experience.

The goal of the PharmD program is to educate pharmacy practitioners to become highly proficient in the delivery and evaluation of patient centered care, and to further advance the practice of pharmacy.

## LEARNING OUTCOMES

The goal of the Qatar University PharmD degree program is to graduate medication therapy experts. Graduates of the program will achieve the following general learning outcomes:

- **Care Provider:** The PharmD student will use their knowledge, skills and professional judgment to provide pharmaceutical care and to facilitate management of patient's medication and overall health needs.
- **Communicator:** The PharmD student will communicate with diverse audiences, using a variety of strategies that take into account the situation, intended outcomes of the communication and the target audience.
- **Collaborator:** The PharmD student will work collaboratively with teams to provide effective, quality health care and to fulfill their professional obligations to the community and society at large.
- **Leader-Manager:** The PharmD student will use their management skills in daily practice to optimize care of patients, to ensure the safe and effective distribution of medications, and to make efficient use of health resources.
- **Advocate:** The PharmD student will use their expertise and influence to advance the health and well-being of individual patients, communities, and populations, and to support pharmacist's professional roles
- **Scholar:** The PharmD student will possess and apply core knowledge and skills required to be a medication therapy expert, and be able to master, generate, interpret, and disseminate pharmaceutical and pharmacy practice knowledge
- **Professional:** The PharmD student will honor their roles as self-regulated professionals through both individual patient care and fulfillment of their professional



obligations to the profession, the community, and society at large.

These educational outcomes will be achieved at a level of performance that is higher than a BSc (Pharm) graduate.

### OPPORTUNITIES

The PharmD program is designed to prepare promising BScPharm graduates for a fulfilling career in advanced clinical pharmacy practice, research and academia.

### ADMISSION REQUIREMENTS

The admission process for the PharmD degree program is designed to ensure that the best and brightest candidates are admitted to the program. Acceptance into the program is highly competitive and considers not only the academic qualifications of applicants but also program resources and capacity for the semester of admission. Only complete admission applications will be considered by the PharmD Degree Program Admissions Committee.

The PharmD degree program only admits students on full-time basis. Admission as full-time is limited only to select Qatar University graduates who have completed the degree requirements for the BScPharm degree at Qatar University. This option is not open for non-Qatar University graduates.

Applicants who have graduated with a BScPharm degree of Qatar University College of Pharmacy are eligible to apply to the PharmD program. Applicants who meet the following minimum criteria will be considered for admission into the program:

- Completed a minimum of a 4-year BScPharm degree with a minimum cumulative grade point average (GPA) of 2.80 out of 4.00 from Qatar University.
- Achieved a passing score on the Qatar Supreme Council for Health pharmacist licensure exam results (Prometrics-based exam since April 2010).
- A satisfactory performance during the personal interview (by invitation) as conducted by the Admission Committee.

### REQUIRED DOCUMENTS

All applicants to the Doctor of Pharmacy program are required to submit the following documents to the Admissions Department:

- [Online Admissions Application](#)
- Official, final and authenticated academic university transcripts

- Official, final and authenticated Qatar Supreme Council for Health pharmacist licensure exam results (PrometricR-based exam taken after April 2010 only)
- Three confidential recommendation letters
- Curriculum Vitae
- One page personal statement
- Health Certificate issued inside Qatar
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must also provide a copy of their passport
- Two (2) recent identical passport size photographs (size 4 x 6 cm) with white background
- [Application Fees](#): QR 350

### DEGREE REQUIREMENTS

#### Doctor of Pharmacy (PharmD) Program

A minimum of 36 credit hours are required to complete the PharmD program. The 36 credit hours required by the program for students over a 12-month period include the following:

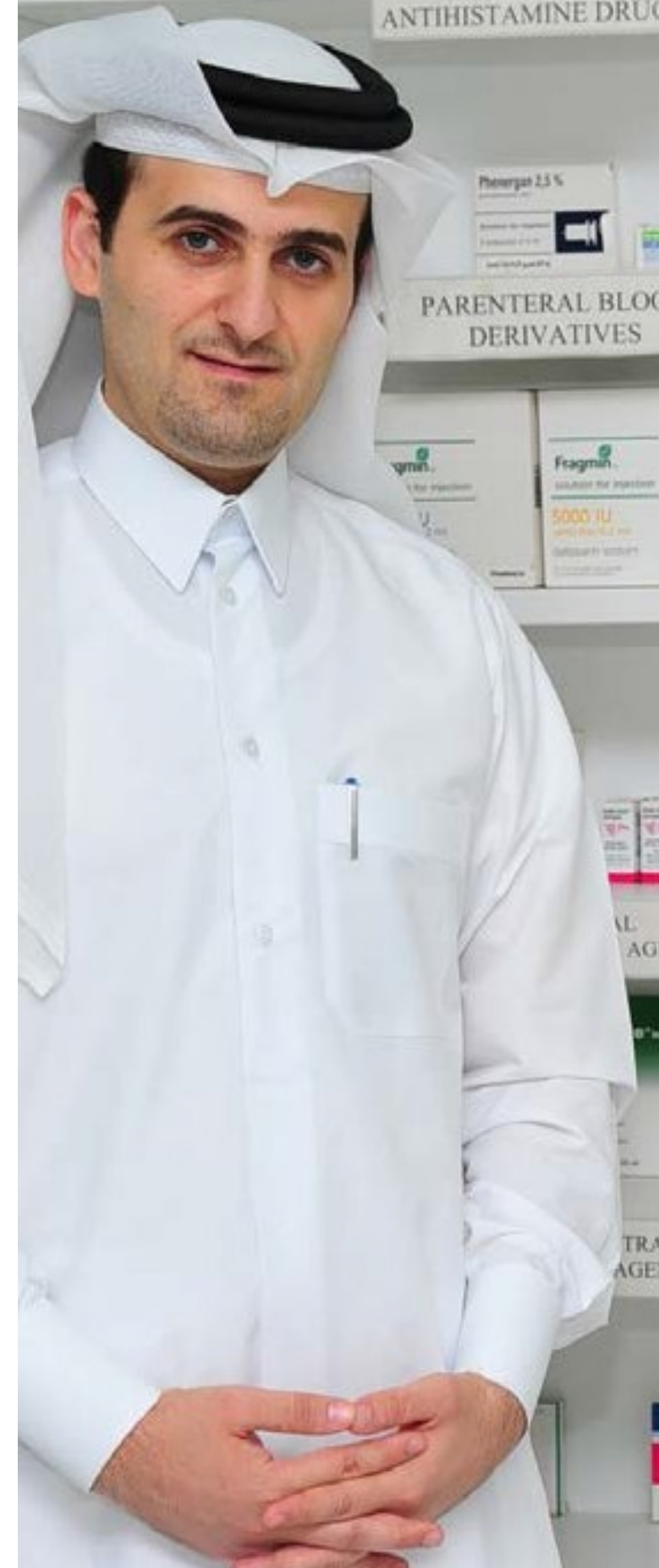
- A minimum of 4 credit hours of didactic courses (on campus).
- A minimum of 32 credit hours of Internship courses (off campus).

### STUDY PLAN

Doctor of Pharmacy (PharmD) - Full Time

FIRST SEMESTER (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Fall	PHAR 605	Advanced Pharmacy Research, Evaluation and Presentation Skills I	2
	PHAR 630	Advanced Professional Practice Internship I	4
	PHAR 631	Advanced Professional Practice Internship II	4
	PHAR 632	Advanced Professional Practice Internship III	4
	PHAR 633	Advanced Professional Practice Internship IV	4
Total			18

SECOND SEMESTER (18 credit hours)			
Term	Course #	Course Title	Cr Hrs
Spring	PHAR 606	Advanced Pharmacy Research, Evaluation and Presentation Skills II	2
	PHAR 634	Advanced Professional Practice Internship V	4
	PHAR 635	Advanced Professional Practice Internship VI	4
	PHAR 636	Advanced Professional Practice Internship VII	4
	PHAR 637	Advanced Professional Practice Internship VII	4
Total			18



## COLLEGE OF SHARIA AND ISLAMIC STUDIES

College of Sharia and Islamic Studies Building

Phone: (974) 4403-4410

Email: [csis.graduatelstudies@qu.edu.qa](mailto:csis.graduatelstudies@qu.edu.qa)

Website: <http://www.qu.edu.qa/ar/sharia/index.php>

### Dean

Prof. Ibrahim Al-Ansari

### Associate Dean for Research and Graduate Studies

Prof. Mohammad Khazer Al-Majali

### Associate dean for academic affairs

Dr. Mohammed Al-mosleh

### Assistant dean for students affairs

Dr. Abdullah Al-muraikhi

## DEGREE OFFERINGS

The college of Sharia and Islamic Studies offers the following graduate degree programs:

Master of Fiqh and Usul Al-Fiqh

Master of Quranic Sciences and Exegesis

Master of Religions and Dialogue of Civilizations

PhD of Fiqh and Usul Al-fiqh

## Master of Fiqh and Usul Al-Fiqh

### Head of the Department of Master of Fiqh and Usul Al-Fiqh

Prof. Salih K Karim al-Zanki

### Program Coordinator

Prof. Ayman Saleh

## ABOUT THE PROGRAM

This program seeks to prepare graduates carrying a bachelor's degree in Islamic law and Islamic studies to become highly proficient and intelligent experts with the requisite skills of research in the field of Islamic Jurisprudence and its principles and also equipped with the characteristic spaciousness of Islamic law. This would be achieved through an interactive, systematically progressive and stimulating learning

environment, based on active learning and the integration of technology which would link theoretical issues to their practical applications and would allow the students to deal with the issues of contemporary life objectively depicting the tolerance of the Islam and its comprehensiveness, diversity, openness and culturally interactive nature.

## OBJECTIVES

The Master of Fiqh and Usul al-Fiqh program aims to assist the student to:

- relate the classic juristic heritage to the contemporary one thereby enabling them to interact with the original sources of Islamic law and utilize it in dealing with the emerging developments and problems,
- develop a juristic mind that has the ability to analyze, criticize and deduce arguments as well as the skills of comparison and judicious preference,
- contribute to research in order to provide practical solutions to con temporary issues related to sharia and juristic disciplines,
- provide the society with those in possession of expertise and competencies in myriad spheres of life for the service of Islam and Muslims.

## LEARNING OUTCOMES

1. Offer possible verdicts combining the classic juristic tradition and modernity and be able to comprehend the situation at hand in its general and specific contexts.
2. Produce sound academic papers in the areas of Jurisprudence and its Principles and the purposes of law.
3. Utilize his/her knowledge of jurisprudence, its principles and purposes in setting modern contemporary issues in their correct legal framework.
4. Compare between the Islamic legal system and contemporary legal systems in various areas.
5. Propose appropriate solutions to family issues as well as judicial, economic and financial ones; in addition, be capable of addressing Islamic politics and international relations.

## OPPORTUNITIES

Graduates of the Masters of Fiqh and Usul al-Fiqh program will be suitable for employment in various positions such as:

- Lecturers and Teaching Assistants in universities.
- Researchers in Specialized cultural centers, including the Al-Jazeera
- Centre for Strategic Studies.
- Teachers in government and independent schools.
- Media centers.
- Employees or Consultants in the following Institutions:

- Ministry of Awqaf.
- The Supreme Council for Family Affairs.
- The Supreme Council of Magistracy.
- Islamic banks.
- Zakat Fund.
- It will also provide a solid foundation to those who would like to pursue doctoral studies.

## ADMISSION REQUIREMENTS

### Eligible applicants must have:

1. Completed a Bachelor degree from the College of Sharia and Islamic Studies at Qatar University with a minimum cumulative GPA of 2.80 out of 4.00 or equivalent from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Passing the personal interview
3. Passing the admission exam: 1- Arabic Language exam. 2- Fiqh & Usul Al-Fiqh exam.

It is to be noted that applicants admitted to the program with Bachelor degrees other than in Fiqh and Usul Al-Fiqh must show evidences of competency in the field of Fiqh & Usul, and yet they may be required to successfully complete bridge courses as required by the college admission committee prior to registering in the master level program courses. Students must successfully complete all required bridge courses with a minimum grade of (C+) before registering in the master program courses.

All applicants to the Master of Fiqh and Usul al Fiqh program are required to submit the following documents to the Admissions Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts
- Health Certificate
- Photocopy of the applicant's Qatar ID card
- (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application Fees

Admission to the Master in Fiqh and Usul al-Fiqh program is offered in the Fall semester only.

For additional information on the program, please see their website at:

<http://www.qu.edu.qa/ar/sharia/programs/master/jurisprudence>

## DEGREE REQUIREMENTS

A minimum of 36 credit hours are required to complete the Master of Fiqh and Usul al-Fiqh

including the following:

- A minimum of 21 credit hours of Major Core Requirements
- A minimum of 9 credit hours of Major Electives
- A minimum of 6 credit hours in Thesis Requirements
- Passing thesis defense exam.
- Publishing one paper at least during their study.

For students holding a baccalaureate degree in a discipline other than Fiqh and and Usul al-Fiqh, they may be required to complete additional bridge courses as specified by the program admission committee at admission time.

### Major Core Requirements (21 CH)

Students must complete the following courses:

- FIQH 610 Textual Study of Usul Al Fiqh
- FIQH 620 Analogy and Reasoning
- FIQH 630 Themes of Implications
- FIQH 640 Research Methodology of Fiqh and Usul Al Fiqh
- FIQH 650 Islamic Law of Judiciary and Evidence
- FIQH 660 Contemporary Issues of Islamic Family Law
- FIQH 670 Fiqh of Money and Economics

### Thesis Requirements (6 CH)

Students must complete the following course:

- FIQH 680 Thesis

### Major Electives (9 CH)

Students must complete 9 credit hours from the following courses:

- FIQH 605 The Purposes of Islamic Law
- FIQH 615 Methodology of Derivation of Legal Opinion and Judgment
- FIQH 625 Islamic Political System
- FIQH 635 Islamic Law of International Relations
- FIQH 645 New Issues of Islamic Worship
- FIQH 655 Islamic Penal Code and Contemporary Issues
- FIQH 665 Islamic Banking Operations
- FIQH 675 Textual Study of Fiqh

### Bridge Course Requirements Package (3-9 CH)

Students holding a bachelor degree in disciplines other than Fiqh and Usul al-Fiqh, may be required to complete a maximum of three additional bridge courses as specified by the program admission committee at admission time. The credit hours



allocated to bridge courses are not counted towards satisfying the 36 credit hours required by the program.

## STUDY PLAN

Master of Fiqh and Usul al Fiqh

FIRST YEAR (18 credit hours)			
Term	Course No.	Course Title	Credit Hours
Fall	FIQH610	Textual Study of Usul al-Fiqh	3
	FIQH 640	Research Methodology of Fiqh and Usul al Fiqh	3
		Elective	3
Total			9
Spring	FIQH 630	Themes of Implications (al-Dalalaat) Implications (al-Dalalaat)	3
	FIQH 670	Fiqh of Money and Economics (Fiqh al-Maal wa alqtisad)	3
		Elective	3
Total			9

SECOND YEAR (18 credit hours)			
Term	Course No.	Course Title	Credit Hours
Fall	FIQH 660	Islamic Law of Judiciary and Evidence (Fiqh al-Qada wa al-Ithbaat)	3
	FIQH 650	Contemporary Issues of Islamic Family Law	3
	FIQH 620	Analogy and Reasoning (al-Qiyas wa al-Ta'leel)	3

		Elective	3
Total			12
Spring	FIQH 680	Thesis	6
Total			6

## Master of Quranic Sciences and Exegesis

College of Sharia and Islamic Studies Building

Email: [csis.graduatelstudies@qu.edu.qa](mailto:csis.graduatelstudies@qu.edu.qa)

Website: <http://www.qu.edu.qa/ar/sharia/index.php>

Phone: (974) 4403-4410

### Head of the Department of Master of Quranic Sciences and

#### Exegesis

Prof. Abdul Jabbar Saeed

#### Program Coordinator

Prof. Ahmad Shukri

### ABOUT THE PROGRAM

This program is a unique religious program in the college of Sharia and Islamic Studies. It seeks to prepare graduates carrying Master's degree in Quranic Sciences and Exegesis to become highly proficient, well equipped, deeply rooted and intelligent experts with required skills of understanding and research in the field of Qur'anic Sciences and Exegesis This goal would be achieved through an interactive, stimulating, cooperative, systematic learning environment, based on active learning, utilizing recent technology. This program would enable Master students in Quranic Sciences and Exegesis and to interpret and defend the Noble Qur'an against western classical and contemporary skepticism and deviated doctrines.

### OBJECTIVES.

The Master of Quranic Sciences and Exegesis aims at achieving the following:

- Deepening skills of research in the field of Qur'anic Sciences (Tafseer) and Exegesis ('Ulum al-Qur'an).
- Shaping and building active, efficient researchers and scholars to face different social, cultural and scientific challenges in the field of Qur'anic Sciences (Tafseer) and Exegesis ('Ulum al Qur'an).

- Integrating and consolidating between classical Arabic and Islamic heritage.
- Advancing and strengthening comparative studies in the field of Qur'anic Sciences (Tafseer) and Exegesis ('Ulum al Qur'an)
- Promoting the dialogue and intercommunication with other human sciences.

### Learning Outcomes.

- After the completion of the Master level program, the students will be able:
- Preparing, writing and publishing high quality scholarly works.
- Practicing obtained cognitive skills in serving the Noble Qur'an.
- Mastering the skills of the interpretation of the Noble Qur'an with its variety doctrines; analytical, thematic and jurisprudential comparative methodologies.
- Exercising his thinking skills in dealing and utilizing related sources to his majoring-specialty.

### OPPORTUNITIES

Graduates of the Master of Quranic Sciences and Exegesis will be qualified to be employed in the following positions:

- Ministry of Endowment (al-Awqaf).
- Supreme Education Council.
- Lecturers of religious courses.
- International Centre for Interfaith Dialogue.
- Assistant lecturers in the universities.
- Scientific and research centers.
- Any job vacancy needed for highly qualified candidate in the field of Qur'anic Studies.
- It will also provide a solid foundation to those who like to pursue their doctoral studies.

### ADMISSION REQUIREMENTS

All applicants to the Master of Quranic Sciences and Exegesis program who meet the following minimum criteria will be considered for admission to Qatar University:

1. Completed a Bachelor degree from the College of Sharia and Islamic Studies at Qatar University with a minimum cumulative GPA of 2.80 out of 4.00 or equivalent from a university or college accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Passing the personal interview
3. Passing the admission exam: 1- Arabic Language exam. 2- Quranic Science & Exegesis exam.

All applicants to Master of Quranic Sciences and Exegesis are required to submit the following documents to the Admission Department:

- Complete Online Admissions Application
- Final, official and certified university transcripts.
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport).
- Two recent identical passport-size photographs with white background
- Application Fees

Admission to the Master of Quranic Sciences and Exegesis is offered in the Fall Semester only. For additional information about the program, please see their website at: [http://www.qu.edu.qa/ar/sharia/programs/tafseer\\_plan.php](http://www.qu.edu.qa/ar/sharia/programs/tafseer_plan.php)

### DEGREE REQUIREMENTS

#### Master in Quranic Sciences and Exegesis

A minimum of 33 credit hours are required to complete the Master of Quranic Sciences and Exegesis including the following:

- A minimum of 18 credit hours of Major Core Requirements
  - A minimum of 9 credit hours of Major Electives
  - A minimum of 6 credit hours in Thesis Requirements
- Passing thesis defense exam.

For students holding a baccalaureate degree in Arabic, in Dawaa and Mass communication, or in a related discipline other than Islamic Studies, the following additional requirement apply:

Student must complete 12 credit hour in Bridge Course Requirements

#### Major Core Requirements (21 CH)

Students must complete the following courses:

- ISLA 600 Analytical Exegeses
- ISLA 601 Qur'anic Sciences
- ISLA 602 Inimitability of al Qur'an
- ISLA 603 The Qur'an and Contemporary Hermeneutics
- ISLA 604 Principles of Qur'anic Exegeses
- ISLA 605 Research Methodology in Qur'anic Studies
- ISLA 606 Textual Studies in the Books of Tafseer

#### Thesis Requirements (6 CH)

Students must complete the following course:

- ISLA 690 Thesis

### Major Electives (9 CH)

Students must complete 9 credit hours from the following courses:

- ISLA 607 Qur’anic Rhetorics
- ISLA 608 Modern Trends of Qur’anic Exegeses
- ISLA 609 Ranks of Qur’anic Exegetes
- ISLA 610 Science of Divine Laws in Nature
- ISLA 611 Introduction to the Objectives of al Qur’an
- ISLA 612 Scholarly Responses to Skepticisms about the Noble Qur’an

### Bridge Course Requirements package (12 CH)

Students holding a bachelor degree in Arabic, in Dawa and

Mass communication, or in a related discipline other than Islamic Studies, must complete 12 credit hours in Bridge Course Requirements consisting of four courses as specified by the program admission committee at admission time.

### STUDY PLAN

Master of Quranic Sciences and Exegesis

FIRST YEAR (18 Credit Hours)			
Term	Course No.	Course Title	Credit Hours
Fall	ISLA604	Principles of Qur’anic (Usul al Tafseer)	3
	ISLA605	Research Methodology in Qur’anic Studies (Usul al Bahth wa al Tahqiq fi al Dirasat al Qur’aniyah)	3
		Elective	3
Total			9
Spring	ISLA606	Textual Studies in the Books of Tafseer ( Dirasat Nassiyyah fi Kutub al Tafseer)	3
	ISLA600	Analytical Advanced (Tafseer Tahlili Mutaqaddim)	3

		Elective	3
Total			9

SECOND YEAR (18 Credit Hours)			
Term	Course No.	Course Title	Credit Hours
Fall	ISLA603	The Qur’an and Contemporary Hermeneutics ( Naqd al Qiraat al Mu’asarah lil Qur’an)	3
	ISLA602	Inimitability of al Qur’an (I’jaz al Qur’an )	3
	ISLA601	Qur’anic Sciences Advanced (’Ulum al Qur’an Mutaqaddim)	3
		Elective	3
Total			12
Spring	ISLA 690	Thesis	6
Total			6

## Master’s Program in Religions and Dialogue of Civilizations

### Head of the Department of Master of Quranic Sciences and Exegesis

Prof. Abdelkader Bekhouche

### Program Coordinator

Dr. Ahmed Zayed

### PROGRAM MESSAGE:

The Master’s Program in Religions and Dialogue of Civilizations is to deepen the rigorous scientific research in the field of religions and dialogue of civilizations. It aims to

broaden the horizons of knowledge among scholars, and to prepare qualified specialists who are able to understand different religions and faiths. It also aims to provide them with a culture that saturated with the purposes of religion, in order to deal consciously with emerging issues in our contemporary reality, and to meet the functional and research needs of the community.

### PROGRAM GOALS:

- Enabling students to understand the dialogue bases of Islam with other civilizations.
- Dealing with the global cultural diversity according to its values and beliefs, which helps the constructive interaction between different civilizations and cultures.
- Recognize the common human culture, coexistence and mutual respect for the religious and cultural specificities of peoples.
- Qualifying students to participate actively in the peaceful efforts of civilized coexistence.
- Enabling students to understand the various international theses on the relationship between civilizations.
- Revival of dialogue traditions that Islam laid their foundations.

### LEARNING OUTCOMES:

When completing the courses and preparing the thesis, the graduate will be able to do the following:

- Represent the Islamic principles for the culture of dialogue.
- Criticize and deconstructing of projects calling for the clash of civilizations, the propagate hatred, extremism and violence.
- Contribute effectively in dialogue and building bridges among different cultures coexisting locally and internationally.
- Highlight the importance of peaceful coexistence, which respects religious and cultural diversity and its role in achieving world peace.
- Understand different cultures, races and religions.

### WORK FIELDS:

After obtaining a Master’s Degree in Religions and Dialogue of Civilizations, the graduate student may acquire academic and research skills, that make him able to get a position in one of the following institutions:

- Ministry of Endowments.
- Ministry of Culture.
- Ministry of Education.
- Ministry of Foreign Affairs.

- QTA.
- The advocacy institution.
- Doha International Center for Interfaith Dialogue, in Doha.
- Interfaith Dialogue Center.
- Discussion Center.
- Mohammed Bin Hamad Al Thani Center for the Contributions of Islamic Civilization.
- Charities.
- Teaching assistant at different universities.
- Call centers in the Islamic world.
- Call centers in Western countries and others.
- International organizations concerned with the dialogue of civilizations such as ISESCO and UNESCO.
- Any job requiring a high level of culture in religions and dialogue of civilizations.
- Scientific and research centers.

### ADMISSION REQUIREMENTS:

The conditions for admission are as follows:

- The student must have a bachelor’s degree from the Department of Call and Culture, i.e. the Department of Islamic Studies previously, Department of Jurisprudence and Principles, currently, and the Department of the Book and Sunnah, or one of the recognized universities, with a rating of 2.8 / 4 and above.
- Passing the Arabic language test.
- Passing the cognitive competence test.
- Passing the personal interview.

Students from other departments who have enough knowledge and scientific qualifications that make them qualify for the Master of Religions and Dialogue of Civilizations Program may be admitted due to the evaluation of the program committee, both quantitatively and qualitatively, in terms of direct or conditional acceptance of some of the courses that the committee also appreciates.

### STUDY PLAN

Master’s Program in Religions and Dialogue of Civilizations:

	Course Title	Number of Hours	Code and Number
	Research Methodologies in Religions	3	DAWA 600
	Judaism and Interfaith Dialogue	3	DAWA 601
	Islamic Christian Dialogue	3	DAWA 602
	Dialogue in Islam	3	DAWA 603



Established Religions	3	DAWA 604
Introduction to the Study of Civilizations	3	DAWA 605
Total of Compulsory Subjects	18 hours	

DAWA 604	Positive Religions	3
DAWA 606	Elective Course (Dialogue of Civilizations)	3
Total (9) Hours		

\* Note: Registration for the dissertation begins with the beginning of the second year.

SECOND YEAR(18 Earned Hours)			
Season	Course Code	Course Title	Number of Earned Hours
Fall	DAWA 601	Religions and Dialogue of Civilizations	3
	DAWA 602	Islamic Cristian Dialogue	3
	DAWA 608	Elective Course (History of Religions - Judaism and Christianity)	3
	DAWA 699	Thesis	3
Total (12 Earned Hours)			
Spring	ISLA 611	Elective Course (Introduction to the Purposes of the Qur'an)	3
	DAWA 610	Contemporary Thought Sects	3
	DAWA 613	Thesis	3

#### Study Fees:

Master's Students

Tuition fees for students enrolled in all Master's Programs are QR 2000 f the earned academic hour.

#### Refund of Tuition Fees:

If the student deletes one or more of the courses or withdraws from the semester after the end of the period of deletion and addition, regardless of the specialization, he/she is subject to financial penalties, as in the following table:

Season	Time of Deletion or Withdrawal after the End of the Deletion and Addition Period	Penalty
Fall and Spring	Up to 2 Weeks	20%
	After 2 weeks to 4 weeks	50%
	After 4 weeks to 8 weeks	75%
	After 8 weeks	100%
Summer	Up to a Week	20%
	After a week up to 2 Weeks	50%
	After 2 Weeks	100%

The penalties, described above, are not counted if the full week breaks a public holiday; the above penalties also apply to both students who pay tuition and those who are exempted from it.

### PhD program in Fiqh and Usul Al-Fiqh

#### Head of the Department of PhD program in Fiqh and Usul Al-Fiqh

Prof. Salih K Karim al-Zanki

#### Program Coordinator

Prof. Ayman Saleh

#### ABOUT THE PROGRAM

The PhD program in Fiqh and Usul Al-fiqh prepares Sharia researchers in the field of fiqh and Usul Al-fiqh who have the ability to enrich knowledge with academic studies and research that respond to the requirements of the contemporary era and its growing jurisprudential and legislative needs in line with the purposes of Sharia and its originality, moderation and flexibility, through competent professors who have insight into their religion, their reality and the aspirations of their nation.

#### OBJECTIVES

- To provide students with a deep knowledge of different aspects of the Fiqh and Usul Al Fiqh that enable them to derive rulings from Sharia, or to balance methodologically between what has been derived before.
- To qualify students to conduct Fiqh and Usul Al Fiqh research that addresses various social and economic issues in Qatari society.
- To provide Qatari society in particular, and Islamic societies in general, with qualified researchers and

professors who fill the needs of these communities in the fields of fiqh and Usul al Fiqh.

#### LEARNING OUTCOMES

After completing the study of the courses and preparing the dissertation, the graduate will be able to:

- Clarify the general principles of sharia and derive Fiqh rulings in a systematic way, in various aspects in the field of Fiqh and Usul.
- Conduct research that deals with contemporary issues in Fiqh and Usul with a balanced view that draws inspiration from the past, realizes reality, and looks forward to the future, based on the Fiqh and Usul knowledge that he possessed throughout his studies.
- Analyze, compare and evaluate contemporary statements, suspicions and perspectives in his field and proposing suitable alternatives.
- Properly apply the methodologies of scientific research and using its tools to produce innovative research aimed at serving society and solving its problems, taking into account research ethics.
- Express moderate Islamic identity in research, study, and internal and external dialogue.

#### OPPORTUNITIES

After obtaining a PhD degree in Fiqh and Usul Alfiqh, the student may obtain academic scientific skills, deepen the research climate at the university, so he can enroll in the following available jobs:

- Ministry of Awqaf.
- Qatar University.
- Ministry of Justice-Legal justice.
- The fatwa.
- Higher education institutions in Qatar: Hamad bin Khalifa University and Community College.
- Most universities and higher education institutions in the region.
- Ministry of Education-curriculum.
- Scientific research centers.
- Islamic banks.

Any job requires a high-level knowledge in fiqh and Usul Al fiqh.

#### ADMISSION REQUIREMENTS

The terms and conditions of admission are as follows:

- The student must have a master's degree in the specialization of Fiqh and Usul Alfiqh in the faculty of Sharia and Islamic studies at Qatar University, or the

Optional Materials: (12 hours)

Course Title	Number of Hours	Code and Number
Dialogue of Civilizations	3	DAWA 606
Logic	3	DAWA 607
History of Religions (Judaism and Christianity)	3	DAWA 608
Philosophy of Ethics in Religions	3	DAWA 609
Contemporary Thought Doctrines	3	DAWA 610
Introduction to the Purposes of the Holy Quran	3	DAWA 611
Total in Optional Courses	12 hours	
Thesis	6	DAWA 699
The Total Number of Hours of the Program	36 hours	

#### STUDY PLAN

FIRST YEAR (18 Earned Hours)			
Class	Course Number	Course Title	Hours Number
Fall	DAWA 600	Research Methodologies in Religions	3
	DAWA 605	Introduction to the Study of Civilizations	3
	DAWA 607	Elective Course (Logic)	3
	Total (9) Hours		
Spring	DAWA 603	Dialogue in Islam	3

equivalent of a recognized university, with GBA at least 3 of (4) or its equivalent.

- To pass the Arabic language test
- to pass the cognitive proficiency test.
- To pass the personal interview
- All applicants to the PhD of Fiqh and Usul al Fiqh program are required to submit the following documents to the Admissions Department:
- Complete Online Admissions Application
- Final, official and certified university transcripts
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Non-Qatari applicants must provide a copy of their passport)
- Two recent identical passport-size photographs with white background
- Application Fees

Admission to the PHD in Fiqh and Usul al-Fiqh program is offered in the Fall semester only.

For additional information on the program, please see their website at:

<http://www.qu.edu.qa/ar/sharia/programs/phd/jurisprudence/message>

#### Requirements for obtaining a degree:

The student must pass ten courses with the dissertation (60 credit hours, 3 hours per course) to obtain the degree in specialization as follows: six compulsory courses (18 hours)

- Four elective courses (12 hours)
- Dissertation (30 hours).
- Published two papers, at least one in an academic refereed journal, and the other could be in an Academic conference or a chapter in a book.

#### Major Core Requirements (18 CH)

Students must complete the following courses

- FIQH 700 Advanced Studies in Fiqh Maxims
- FIQH 701 Advanced Studies in Usul al-Fiqh
- FIQH 702 Advanced Studies in Contemporary Fiqh
- FIQH 703 Fiqh and Usul al-Fiqh Renewal Methods
- FIQH 888 Seminar (0 credit Hours)
- FIQH 705 Advanced Studies in Sharia Objectives
- FIQH 707 Fiqh and Usul al-Fiqh Dissimilarities

#### Major Electives (12 CH)

Students must complete 12 credit hours from the following courses:

- FIQH 706 Advanced Studies in Politics of Sharia

- FIQH 708 Fiqh Theories
- FIQH 709 Advanced Studies in Zakah and Waqf
- FIQH 710 Advanced Studies in Islamic Economics
- FIQH 711 Derivation of Rulings from its Principles
- FIQH 712 Contextual Significance
- FIQH 713 Theory of Knowledge
- FIQH 715 Conflict and Preferring

#### Dissertation Requirements (30 CH)

Students must complete the following course:

- FIQH 899 Dissertation

#### STUDY PLAN

FIRST YEAR (18 credit hours)			
Term	Course No.	Course Title	Credit Hours
Fall	FIQH 701	Advanced Studies in Usul al-Fiqh	3
	FIQH 703	Fiqh and Usul al-Fiqh Renewal Methods	3
		Elective	3
<b>Total</b>			<b>9</b>
Spring	FIQH 700	Advanced Studies in Fiqh Maxims fiqh	3
	FIQH 702	Advanced Studies in Contemporary Fiqh	3
		Elective	3
<b>Total</b>			<b>9</b>

Note: registering for the dissertation begins in the second year

SECOND YEAR (18 credit hours)			
Term	Course No.	Course Title	Credit
Fall	FIQH 705	Advanced Studies in Sharia Objectives	3
	FIQH 707	Fiqh and Usul al-Fiqh Dissimilarities	3
		Elective	3
<b>Total</b>			<b>12</b>

Spring	FIQH 888	Seminar	
		Elective	3
<b>Total</b>			<b>3</b>

Note: In the fourth semester, the student will apply for the Comprehensive Exam and is allowed to register the hours of the dissertation only after passing the test, and can apply for the test in the third semester, subject to the approval of the scientific department and the Graduate Office of the College.

Third YEAR (21 credit hours)			
Term	Course No.	Course Title	Credit Hours
Fall	FIQH 714	Dissertation	9
	Candidacy Exam		
<b>Total</b>			<b>9</b>
Spring	FIQH 714	Dissertation	12
<b>Total</b>			<b>12</b>

Note: In the fifth semester, the student will apply for the candidacy Exam Test after completing the research plan and methodology.

SECOND YEAR (18 credit hours)			
Term	Course No.	Course Title	Credit Hours
Fall	FIQH 714	Dissertation	9
	Deviance exam		
<b>Total</b>			<b>9</b>



## CHAPTER 10. COURSE LISTINGS

### ACCT 110

#### Financial Accounting

##### Credit Hours: 3

This course introduces financial accounting for various business entities. Topics covered include accounting concepts and principles based on generally accepted accounting principles (GAAP). Emphasis will be on analyzing, recording, classifying, and communicating information, including the preparation of financial statements.

### ACCT 116

#### Managerial Accounting

##### Credit Hours: 3

This course focuses on the principles of management accounting as it applies to the use of accounting information in planning and controlling business operations. Students are introduced to cost terms and concepts, cost behavior, cost-volume-profit analysis, variable costing, budgeting, and relevant costs for decision-making

### ACCT 501

#### Introduction to Accounting

##### Credit Hours: 3

Presentation of theoretical and practical aspects of accounting information relevant to businesses by examining basic accounting concepts, preparation and usages of financial statements, including income statement, balance sheet, statement of stockholders' equity, and statement of cash flows.

### ACCT 521

#### Intermediate Accounting I

##### Credit Hours: 3

This course introduces essential financial accounting concepts and standards related to corporate reporting, with special emphasis on preparation of financial statements. Areas studied include cash, receivables, inventory, investment, plant and equipment, and revenue recognition.

### ACCT 522

#### Intermediate Accounting II

##### Credit Hours: 3

This course provides a continuation of financial accounting concepts and standards related to corporate reporting. Areas to be studied include current and long-term liabilities, owners' equity, leases, statement of cash flow, and accounting changes and error analysis.

### ACCT 523

#### Accounting Information Systems

##### Credit Hours: 3

This course focuses on concepts and procedures related to accounting information systems. Areas studied include system design and implementation, the relationship between accounting information systems and other information systems within the organization, flowcharts, and computer applications and tools.

### ACCT 531

#### Cost and Management Accounting

##### Credit Hours: 3

This course provides an in-depth study of cost/management accounting concepts and principles as they apply to manufacturing and service environments. Students are introduced to cost accumulations and assignments using traditional and contemporary cost accounting approaches, and budgeting. The use of accounting information in planning, controlling, and evaluating business decisions both short- and long-term are covered.

### ACCT 533

#### Auditing I

##### Credit Hours: 3

This course introduces basic concepts of auditing attestation and assurance. Areas studied include the quality control standards and the code of professional ethics, regulation and legal liabilities audit evidence and audit programs, assessment of risks and materiality, and audit reports.

### ACCT 602

#### Managerial Accounting for Decision Making (MBA)

##### Credit Hours: 3

Preparation, analysis, interpretation and use of accounting information in the guidance and control of a business enterprise are discussed. The course concentrates on the decision-making process in measuring and reporting. Sophisticated approaches in budget preparation, performance evaluation, profit centers and transfer pricing are covered.

### ACCT 603

#### International Accounting

##### Credit Hours: 3

This course focuses on accounting from a global perspective. The International Financial Reporting Standards (IFRS) are the wide spread set of accounting standards adopted in several countries. This course integrates International Financial Reporting Standards (IFRS) into an advanced financial accounting course. The course will enhance students understanding of the links between the underlying transactions, the application of IFRS to those transactions and the financial statements obtained from an international perspective.

### ACCT 604

#### Energy Financial Accounting

##### Credit Hours: 3

This course introduces oil and gas accounting with emphasis on accounting for costs incurred in the acquisition, exploration, development, and production of oil and natural gas using full cost accounting methods. Topics also cover joint interest accounting, gas pipeline accounting, required disclosures for oil and gas activities, and analysis of the financial statements of oil and gas companies.

### ACCT 606

#### Corporate Governance

##### Credit Hours: 3

This course considers current academic thinking about corporate governance and ownership. Topics include business structure of the firm, the role of institutional investors in the public corporation, major differences in large firm corporate governance around the world, and shareholder primacy.

### ACCT 608

#### Commercial Law

##### Credit Hours: 3

This course provides a survey of important legal issues in the commercial law. Emphasis will be on the contracting process, payment for contracts (particularly through the use of negotiable instruments), and security for payments (particularly suretyship and secured transactions). The course will also briefly deal with bills of lading and warehouse receipts (with emphasis on the negotiability of these documents) and letters of credit.

### ACCT 612

#### Special Studies in Accounting

##### Credit Hours: 3

This includes directed study and research on selected accounting topics, including the development of accounting thought and research in international accounting, professional ethics and managerial and financial accounting.

### **ACCT 613**

#### **Accounting Research Methods**

**Credit Hours: 3**

This course introduces research methods used in accounting. It is intended to help Master’s students to scientifically approach accounting related problems through a clear structure of ideas, using scientific methods to collect and analyze data. This is a “hands-on” course, covering topics such as developing the research idea, theory and hypothesis development, survey research, experimental research, case studies research, archival research, and tips on how to write the research report

### **ACCT 623**

#### **Advanced Cost/Managerial Accounting**

**Credit Hours: 3**

This course offers a study of contemporary developments and cover topics in the area of cost and managerial accounting. Topics include a discussion of quantitative techniques and their applicability to accounting problems.

### **ACCT 331**

#### **Cost and Management Accounting**

**Credit Hours: 3**

This course provides an in-depth study of cost/management accounting concepts and principles as they apply to manufacturing and service environments. Students are introduced to cost accumulations and assignments using traditional and contemporary cost accounting approaches, and budgeting. The use of accounting information in planning, controlling, and evaluating business decisions both short- and long-term to be covered.

### **ACCT 333**

#### **Auditing I**

**Credit Hours: 3**

This course introduces basic concepts of auditing attestation and assurance. Areas studied include the quality control standards and the code of professional ethics, regulation and legal liabilities audit evidence and audit programs, assessment of risks and materiality, and audit reports.

### **ACCT 633**

#### **Gov. & Non-profit Accounting**

**Credit Hours: 3**

A study of the objectives and standards underlying accounting and auditing practices in non-profit organizations, including governmental entities, colleges and universities, hospitals, and other non-profit organizations. Topical coverage includes the system of fund accounting, financial report preparation and analysis, and related audit and ethical considerations.

### **ACCT 643**

#### **Fraud Detection and Prevention**

**Credit Hours: 3**

This course offers in-depth study of how and why fraud is committed, how fraudulent conduct can be deterred, and how allegations of fraud should be investigated and resolved

### **ACCT 653**

#### **Advanced Accounting Information Systems**

**Credit Hours: 3**

A Survey of advanced accounting information systems technologies used to enhance business process operations and management of risks and controls. Topics relevant to information technology as it pertains to the accounting profession and the changing nature of accounting information systems will be examined.

### **ACCT 663**

#### **Business Info. Consulting**

**Credit Hours: 3**

This is the capstone course for the Master of Accounting program. The student will experience an integrative course that is intended to address the knowledge base needed by accounting professionals in serving as consultants. Principles and concepts are applied through the analysis and presentation of case studies dealing with current issues or emerging trends in the fields of accounting.

### **ACCT 695**

#### **Thesis**

**Credit Hours: 0 TO 6**

This is the capstone course of the Master of Accounting program for the thesis track. The thesis will show that the students are able to conduct a research project on current or emerging issues in accounting. They will relate the objectives/questions, the research methods, and the findings to the relevant academic and non-academic literature. Students are expected to submit a thesis under the supervision of an assigned supervisor.

### **ACCT 800**

#### **Analytical and Empirical Research in Financial Accounting and Reporting**

Credit Hours: 3

The course introduces students to both analytical and empirical research in financial accounting. The course will discuss the variety of topics and methods addressed by accounting scholars and will seek to provide insight into the characteristics that distinguish the highest quality research. The class is designed to help students to better evaluate research in workshops, develop new ideas, and do empirical tests. Students also are exposed to a wide range of empirical research methodologies, including large sample archival research, small sample nonparametric methods, and field-based research.

### **ACCT 801**

#### **Contemporary Issues in Management Accounting**

**Credit Hours: 3**

This course explores analytical and empirical research. It focuses on studying management control and performance measurement issues largely from an economics perspective using archival methods. This course, required of accounting doctoral students, covers contemporary research in managerial accounting. We review major trends in analytical and empirical research, including agency theory. Students are required to design a research project around a managerial accounting question.

### **ACCT 802**

#### **Doctoral Seminar in Accounting Theory**

**Credit Hours: 3**

This course has been designed to research in accounting theory. In addition to discussing accounting in its familiar role as an income measurement tool and as an input to decisions under uncertainty, this course study how efficient markets, compensation practices, debt covenants, and other broad economic consequences impact accounting policy makers and those who make accounting choices. This course covers the following topics in the realm of accounting theory: accounting information and the capital markets, accounting method choice, accounting regulatios, economics of information, politicization and virtualization of accounting theory, survey and empirical research in accounting

### **ACCT 803**

#### **Issues in Auditing and Assurance**

**Credit Hours: 3**

This course is a survey of recent empirical research in auditing. This course introduces a significant number of the research questions and methods in empirical research in auditing. Every Ph.D. student in accounting to gain some appreciation for the complexity of designing an empirical project, the questions that arise in data collection, the sensitivity of results to choice of statistical techniques, and the difficulty of communicating technical material accurately and efficiently.

### **ACCT 804**

#### **Contemporary Accounting Information Systems Issues**

**Credit Hours: 3**



The course explores the technological aspects of accounting knowledge and practices. This course explains why Accounting Information Systems are valuable when making business decisions, and provides a basic overview of how IT infrastructure works. Accountants play an important role in designing accounting information systems. A new role of the accountant's community includes understanding how accounting information systems work in order to measure how cost-effective the system is performing, assess reliability, and to engage in continuous improvement of the system. Students will be required to solve cases utilizing problem solving techniques and critical thinking.

## ACCT 805

### Corporate Governance and Accounting Ethics

#### Credit Hours: 3

The objective of the course is to enable the doctoral students to explore interesting issues and research questions in corporate governance finance. The students will be introduced several advanced topics and current and contemporary issues in corporate governance and accounting ethics and expose them to some current issues. An emphasis will be put on the link between empirical and theoretical work, and how to critically think and analyze the corporate governance and accounting ethics issues. The course will have weekly seminars held and the students will prepare and discuss a broad range of prescribed readings. Each seminar addresses methodological themes as well as substantive research material.

## ACCT 806

### Special Topics in Accounting Research

#### Credit Hours: 3

This course will offer exploration of a special topic, issue, or trend in the accounting (e.g. Taxation, public sector accounting, gas and oil accounting, accounting education, Islamic accounting, and others).

## ARAB 100

### Arabic Language I

#### Credit Hours: 3

The course aims to provide students the important skills to communicate in Arabic; listening, speaking and reading, with attention to writing skills in relation to each. This is done through content that includes a variety of topics related to Contemporary Arabic, through deep analysis of linguistics and literary texts. The course has been introduced in an interactive learning environment based on: 1) student activities, 2) Developing student skills, 3) learning and collaborative methods, 4) Communication skills for self-expression and ideas in different ways, 5) Solving problems through critical thinking skills and creativity, and 6) The absorption of ideas in different contexts. The assessment process uses a variety of tools to measure the attainment of student learning outcomes.

## ARAB 200

### Arabic Language II

#### Credit Hours: 3

The course aims at enabling the student to master the skill of the Arabic writing, and scientific and professional communication. These aims will be realized by the course content, which combines the basics of the language and linguistic rules to regulate the methods of writing, and experience on the skills of the Arabic writing in the following forms: 1) Functionally and creatively, 2) Traditionally and contemporary, and 3) Descriptively and analytically. Furthermore, the course aims at handling written problems by self-learning and collaborative environments that develop creative skill, dialogue, discussion, and critical thinking. It will also promote methods of written expression toward both the self and career, including help in the acquisition of knowledge, and building cultural awareness and good citizenship. The performance of the student will be evaluated through the various assessment tools that focus on the students' writing skills, in order to achieve the desired learning outcomes.

## ARAB 500

### Theo. & Res. Method. Ling

#### Credit Hours: 3

The aim of this course is to enable students to master the principles of research in linguistics. The main focus will be on the knowhow of dealing with cognitive problems and issues that occupy the science of language. The course will further address and define the methods of linguistics theory. Students will be expected to study a selection of reputable research and take part in presentations and discussions that will articulate their research and debating skills. The learning environment

of the class will be student-oriented, utilizing a variety of assessment tools, such as: papers, presentations, research projects and assignments.

## ARAB 501

### Theory and Research Methodologies – Literature

#### Credit Hours: 3

The aims of this course is to provide students with the theoretical tools necessary in grasping theories emerging from the Arts and Social Sciences and utilizing them in research, analytical studies and debates. This course will distinguish between scientific provisions and criticisms. Students will gain knowledge through scientific theory, principles and their procedures in the humanities, especially with how they relate in terms of philosophy and scientific reason. The learning environment of the class will be student-oriented, utilizing a variety of assessment tools, such as: papers, presentations, research projects and assignments.

## ARAB 502

### Seminar in Linguistics

#### Credit Hours: 3

This seminar aims to equip students with necessary research skills in the Arabic language, dealing with concepts and approaches of linguistics and language development. It aims to teach students the mechanisms of interpreting linguistic research in the context of different language curriculum with applied studies. Students will be assessed through the following tools: papers, presentations, research projects and assignments.

## ARAB 503

### Seminar in Literature & Literary Criticism

#### Credit Hours: 3

This seminar aims to equip students with extensive research skills in methodology and critique in the study of Arabic literature as manifested in a variety of literary works. Students will be actively taking part in a multitude of workshops and open discussions analyzing the different perspectives and mechanisms used in Arabic literature (i.e. stories, novels,

drama, etc.). Students will be assessed through the following tools: papers, presentations, research projects and assignments.

## ARAB 504

### Seminar in Comparative Cultural Studies

#### Credit Hours: 3

This seminar aims to equip students with the research skills necessary for comparative studies, specifically those related to Arabic literature as to foreign language literature. Students will focus on literary subjects that are widely debatable in the Arts realm through ongoing applied workshops.

## ARAB 505

### Arabs Linguistic Thought

#### Credit Hours: 3

This course prepares the students to identify the efforts of advent Arab linguists with their foundation work on contemporary linguistics studies. It introduces and links between the old and new linguistic studies through introducing students with the methodological foundations originating from early research on acoustics, morphology and lexicon.

Topics to be covered in the course are as follows:

1. Historical and Cultural framework on the origin of linguistics research to the Arabs.
2. Arab Scholars' description of Arab vocals.
3. Exploring ways to study issues and structure of the Arabic word.
4. Grammatical research methodologies used by Arab linguist.
5. Significance of lexical and research methods.
6. Evaluating language research methods of the Arabs.

Students will be assessed through the following tools: papers, presentations, research projects and assignments.

## ARAB 506

### Critical and Rhetoric Thought Among Arabs

#### Credit Hours: 3

For this reason, study will be in the form of applied research studying concepts of rhetorical theories developed by Arab veterans with a focus on simulation, concepts of pronunciation, and literary functions. Furthermore students will be expected to study the theoretical relationship between the past Arab literature and the theories presented by Aristotle in his books concerning the art of poetry and rhetoric. Students will thus be able to distinguish between acculturation and intentional conscious that took place between Arab and Greek culture. Students will be assessed through the following tools: papers, presentations, research projects and assignments.

## ARAB 507

### Phonetics and Phonology

#### Credit Hours: 3

This course aims to deepen students' understanding of the physiological properties of sound and principles of phonology as applied to the Arabic language and spoken dialects. Students will compare spoken acoustic phenomena and deterministic over the Arab voice as to other languages. It also deals with the decision to test several theories of phonology through applied field research and laboratory data collection and audio from multiple sources, with a focus on Optimality Phonology. This course will provide students to take part in field research and laboratory data collection and audio from multiple sources. Students will be subject to the latest means of testing and analysis in both a self-learning and collaborative environment. A variety of assessment tools will be used to assess students, including: research papers, and projects.

## ARAB 508

### Contemporary Literary Theory

#### Credit Hours: 3

This course seeks to guide student researchers at the Masters level to review various developments in the field of critical studies of modern and contemporary literature. This course will further introduce students to different theories such as: theory of reading and receiving, the theoretical structural and post-structuralism (the death of the author), the theoretical

semiotics and stylistics theory, Freudian theory, the theory of reflection, the theory of displacement and feminist theory in literary criticism. Students will gain the ability to represent theories and analyze the literary discourse, and identify the leading figures in critical theory on, such as: Roland Barthes, Bakhtin, Lucien Goldman and Edward Said. A variety of assessment tools will be used to assess students, including: research papers, and projects.

## ARAB 509

### Lexicography and Terminology

#### Credit Hours: 3

This course aims to deepen students' understanding on theories in the development of modern lexicon, and their applications in lexicography Arabic. There will also be a focus on the insight of Arabic language academies in Cairo and Damascus, Baghdad and Amman in the work and development of educational, historical scientific and contemporary dictionaries, and the drafting of great lexicon, and the lexicon of history, and dictionaries. In addition students will be introduced to the efforts of the Office of Arabization in Rabat, connecting them to theoretical and analytical studies to systematically address the achievements lexical modern Arabic. The course will offer a learning environment that allows students to develop research skills, and therefore instructors will use the following assessment tools: research paper, offers research and projects, and some assignments.

## ARAB 510

### Syntax

#### Credit Hours: 3

The aim of this course is to enable students to master the conventional system of works by studying their rules in forming grammatical sentences in linguistics. Students will also study the patterns of formation of sentences and phrases found in the Arabic language. The course will focus on the principles of structural analysis and application of the Arabic language and dialects spoken while also comparing it to other languages such as English, French, Chinese and Russian. The course will allow students to collect linguistic data from multiple sources for the purpose of analysis. The course will offer a learning environment that allows students to develop research skills, and therefore instructors will use the following assessment tools: research paper, offers research and projects, and some assignments.

## ARAB 511

### Issues in Arabic Poetry

#### Credit Hours: 3

The aim of this course is for students to master the most important technical issues in classical and modern Arabic poetry through the study of historical and social contexts. The course will focus on the issues that represent distinctive achievements and that brought about an increase in awareness and understanding of Arabic poetry. Furthermore, the course will discuss the manifestation of Arabic poetry in Arab culture and its linkages to popular world culture. Some of the topics that will be discussed are:

1. Awareness and structure of the Arabic poem
2. Reality or artificiality in the creation of a poem
3. Manifestation of modernity in Arabic poetry
4. The structures of meaning and functions of text.
5. Poetry and Islam
6. Prose
7. Components of Arabic speed in poetry
8. Poetic exchange between Arabic and western criticism.

A variety of assessment tools will be used to assess students, including: research papers, and projects.

## ARAB 512

### Theory of Metaphor

#### Credit Hours: 3

This course aims to introduce students to extensive metaphorical theories and how they differ in Arabic and Western poetry. From this perspective, the course will focus on metaphorical theories such as; theory of knowledge, replacement theory and contextual theory. Furthermore, the course will delve into metaphorical approaches such as; Gestalt's approach, Anthropological approach, philosophical approach, grammatical approach, while concentrating on psychological metaphorical approaches and the importance in analyzing Arabic poetry and criticism. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## ARAB 513

### Paleography

#### Credit Hours: 3

This course aims to provide students with the skill necessary to analyze cultural texts in order to identify discourses through a scientific method. The course will address several procedural issues related to the art of composition from manuscripts collections while applying elements of investigative procedures. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## ARAB 514

### The Hist.of Literary Criticism

#### Credit Hours: 3

This course aims to equip graduate students with the background on the history of Arab and Western literary criticism, including their various schools of thought. The course will enable students to become familiar with the different stages of literary criticism, ranging from Aristotle, the role Arabic literary criticism and its contribution to 19th century and up to modern American literary criticism. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## ARAB 515

### Philos. & Critical Thought

#### Credit Hours: 3

This course aims to introduce graduate students to different methods of philosophical critic through critical thought. This course is intended for students who will follow the 'Literacy Criticism' concentration of the MA in Arabic program, since it will equip them with cultural contexts and knowledge on the roots of philosophical theories. The objective of the course is to raise understanding through analyzing philosophical and intellectual problems that arise from critical criticism. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.



## **ARAB 516**

### **Post-Colonial Literature**

#### **Credit Hours: 3**

This course aims to introduce students with insight on post-colonial cultural theory, which is considered one of the main components of the ‘Post theories’ that include, post structuralism and post modernism. ‘Post theories’ that have dominated the cultural scene in terms of literary criticism in Cultural Studies have been considered to be very much part of the post-colonial literature of the 80’s and 90’s, studying the literature written by Edward Said and Frantz Fanon. The course will also address literary texts that discuss concepts of post-colonial literature in the Arab world through analyzing the literary work of; Mohammad Deeb, Taher Bin Jalloun, Assia Jaban, Yousif Idris, Tayb Saleh and Yehia Al Tahir Abdallah. A variety of assessment tools will be used to assess students,

## **ARAB 517**

### **Literature and Theories of Contemporary Psychoanalysis**

#### **Credit Hours: 3**

This course aims to make students delve deeper into the study of literature based on achievements in psychology and its influence on the analysis of literary discourse. The course will particularly focus on the decisions of Sigmund Freud, Alfred Adler, Carl Gustav Jung, Mircea Eliade, Gaston Bachelard and Gilbert, particularly their work concerning the structure of language and structure of the human imaginary (imaginary) and archetypes. The course will also focus on the achievements and applied studies done by Arab scholars and critics, such as; Taha Hussein, and Azzedine Ismail and Yusuf Sami Alyousuf. Student will thus be able to realize the failure and limitations of prominent psychological literary figures through a thorough study of their essays. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## **ARAB 518**

### **Sociolinguistics**

#### **Credit Hours: 3**

This course aims to address the relationship between language and the social environment in which they interact with all aspects of economic, political, religious and historical significance. The course focuses on bilingualism in the Arab

world and the issue of localization and the problem of language planning especially in the fields of education and economic development and the relationship between Arabic and other languages, tradition and modernity and development, and globalization. Also this course will address the particularities of language in the Arab world and compares the linguistic status in other states. Students will practice the principles of research and methods in this field through collecting field data, and analysis. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## **ARAB 519**

### **The Arab Language in the World**

#### **Credit Hours: 3**

This course deals with the Arabic language and its impact outside the borders of the Arab world, through exploring its history and phases of the its spread outside the Arabian Peninsula into Asia, Africa and Europe. The course will also focus on the factors that aided the spread of the Arabic language in particular religious, cultural and scientific. Furthermore, an in-depth examination of Arabic’s different stages and multiple levels of acoustic and morphological and lexical, and at the level of the letters in alphabetical order: such as language Farsi, Turkish, Swahili, Berber, Spanish, German, French, English and many other languages in Asia and sub-Saharan Africa, and the effect that impact of these languages in the Arabic language. The course will also expose students to the problem of globalization and its repercussions on the Arabic language. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## **ARAB 520**

### **Arabic Dialectology**

#### **Credit Hours: 3**

This course is intended to introduce students to the multiple Arabic dialects, as it is an important component of the study of linguistics. The course will aim to introduce students with the principles of linguistics, comparative and processed to the similarities the difference between the different Arabic dialects used in the Arab world and some countries Africa and Asian. The main focus will be on the development of dialects and conditions of their formation and evolution, referring to the characteristics of acoustic and morphological, structural and lexical and its interaction with the classical Arabic

language. It will also address the different theories of Arabic Linguists and how they were influenced by the heritage of Arabic dialects and the readings and their relevance to other dialects. Students will have the opportunity to test these theories through practical applications.

## **ARAB 521**

### **Discourse Analysis**

#### **Credit Hours: 3**

This course aims to introduce the concept of discourses in different texts, and the relationship between them through an in-depth study of text and linguistics. The course will also deal with the concept of analysis and deconstruction, the theory of grammatical patterns and consistency, and the theory of grammatical text spaces grammatical, and the impact of context in implicit text, approaches to linguistics. It also addresses the A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## **ARAB 522**

### **Modern Arabic Narrative Genres**

#### **Credit Hours: 3**

This course aims to familiarize students with modern Arabic narrative through research, analysis and critical thinking. The course will focus on 20th century modern Arabic narrative along with structuralism and post structuralism in the West. An in-depth analysis on narrative texts, and accurate classification of the components of narrative texts, in order to raise awareness of the societal contrasts apparent in Arab culture in contexts of the narrative texts of Arabic. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## **ARAB 523**

### **Studies in Gulf Literature**

#### **Credit Hours: 3**

This course aims to enable students with the knowledge of literary works originating in the Arab Gulf, and to what extent it has been influenced by Gulf culture and regional issues.

Students will study the characteristics of contemporary literature in the Gulf and the concept of identity in Arab Gulf literary context. Furthermore, Gulf literature will be analyzed through its relationship with Arab and Western literature. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## **ARAB 524**

### **Practical Applications**

#### **Credit Hours: 3**

This course aims to equip students with methods of scientific and ethical research in preparation of a Master’s degree. The course will includes activities centered on how to select a topic, scope, and method of data collection. Students will be familiarized with different types of research and techniques of research writing, presentation and dissemination. It also will give students the opportunity to present their research projects to their classmates, to benefit from their peers’ experience.

## **ARAB 525**

### **Cultural Criticism**

#### **Credit Hours: 3**

This course will provide graduate students enrolled in either the Comparative Cultural Studies or Literary Criticism concentrations with knowledge on the rhetorical dimensions and contextual review that are implicit to cultural patterns and cultural discourses of Arabic Literature. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## **ARAB 526**

### **Post Modernism**

#### **Credit Hours: 3**

This course is intended to transmit to students the stages of postmodern critical thought in three stages: (1) The terminological and historical referencing to post-modernism theory. Students will research the background of political and social culture that emitted from European literature and its manifestation in contemporary philosophical Arab literature;

(2) Study the relationship between the cognitive thought and philosophy of postmodern theory; (3) Study the relationship between the theory and principles of postmodern literary criticism. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## ARAB 527

### Global Comparative Literatures

#### Credit Hours: 3

This course examines the theoretical and practical efforts that deal with literary creativity, in Muslim communities with different languages, including in Arab, Persian, Indian, French and English. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## ARAB 528

### Comparative Literature

#### Credit Hours: 3

This course gives students the opportunity to observe the acculturation taking place between Arabic literature and classical and modern literature, especially in regards to the use of religious symbols and historical figures, symbols, mythical and the way all the literature in employing them. A variety of assessment tools will be used to assess students, including: research papers, presentations, projects and assignments.

## ARAB 548

### Thesis

#### Credit Hours: 6

This course aims to enable students to enter the academic research system by directly framing them throughout the theses stages at the level of the program; in order to receive an academic grade. This course differs from previous courses for being a practical course which depends on direct supervision, guidance and advising through weekly meetings during which there is careful follow up on the researchers work in stages that form the

research material, and during which he/she is provided with strict supervision. That all intending by the end of the second semester (spring) to submit the thesis for defense.

## ARAB 550

### Arabic Literature A History of its Origins and Evolution

#### Credit Hours: 3

ARAB 550 aims to define Arabic literature in its various stages of development. It starts from the pre-Islamic era and the Islamic eras to the modern Arabic literature. It identifies the various artistic features of Arabic poetry and prose.

ARAB 550 is presented in an active learning environment, centered on the learner, and employs various assessment tools such as research, presentations, and assignments

## ARAB 551

### Linguistics

#### Credit Hours: 3

This course aims at enabling the student to have an accurate knowledge of modern linguistics basic principles and concepts through presenting the linguistic ideas prior to the emergence of linguistics with its concept, subject matters, links with various sciences, and different trends. It also seeks to dissect theories and methods, define the levels of linguistic analysis (phonetic, morphological, syntactic, and semantic), describe and interpret languages in an attempt to apply all of these tasks onto the Arabic language in a systematic manner, using modern methods such as phonemic, morphological and syntactic analysis . This course is delivered in an active learning environment that employs various assessment tools such as researches, presentations, assignments, and others.

## ARAB 552

### Principles and Methods of Literary Criticism

#### Credit Hours: 3

This course provides student with an organized knowledge of the emergence and development of literary criticism. This includes identifying its methods, approaches, schools, terms and concepts in order to develop students’ critical thinking through individual and collective activities that contribute to enhancing its ability to link heritage and contemporary and awareness of constructive communication mechanisms with the other.

## ARAB 553

### Grammar, Morphology and Philology

#### Credit Hours: 3

This course is a compensation for the grammar and morphology courses that the student studies at the undergraduate level. It provides the student with knowledge and skills on the topics of Arabic morphology and word construction, such as the morphological scale, derivation, verb attribution, plural, gender, inflection and substitution. It introduces the most important issues of Arabic grammar: nominal and verbal sentences, their components and dependents as well as the relationship between grammar and meaning. It depends on presenting the basic elements of the Arabic metrical science, poetic meters and some examples from the meters of Arabic poetry like Al Kaamil, Al Waafir, Al Rajaz, Al Basiit and Al tawiil. It ends with a mention of poetic rhyme and its variations according to the different schools of poetry from metrical to free verse, which does not respect a specific rhyme. It aims at providing a basic preliminary definition of the issues of philology, lexicon, and semantics, so that these topics become a strong basis for the student to progress in the Master degree courses. This course is presented in a dynamic and interactive group-learning environment, adopting various assessment methods such as presentations, research papers, and reviews of books or chapters thereof.

## BIOL 501

### Earth Systems

#### Credit Hours: 3

The core course provides a basic foundation of understanding of the processes in environmental systems that link biogenic and abiogenic components. Topics covered include the complex couplings and feedback mechanisms linking the geosphere, biosphere, hydrosphere, and atmosphere, and the

cycling of components (including nutrients) from microbial systems to “higher-order” systems, including human. In this regard, the dependence of Earth Systems on the different kingdoms of life, especially microbial and photosynthetic systems, emphasizing for example “atypical communities” found in thermal deep-ocean sea vents, is an especially important concept for the students to garner from the course. Of particular emphasis is the cycling of C, N, P, and S through natural and man-made systems with relevance to freshwater and marine aquatic environments and of especial relevance to environmental processes. The course focuses intensively on the basic principles of complex systems, through theoretical and practical considerations, as well as consideration of those case studies which illustrate them. The review and discussion of these topics, in addition to: energy resources and the environment; natural hazards: prediction and risk: society, the environment and public policy; steps from environmental science to effective policy; agriculture and global change provides the necessary basic understanding that the students carry with them through the curriculum.

## BIOL 502

### Geog. Info. Syst (GIS) & Data.

#### Credit Hours: 3

Through this course, students gain an advanced knowledge of information systems and how they are linked (with particular reference to the ministries of Qatar), computer science, and the analytical tools and approaches used in GIS. Students are taught how to implement the knowledge, tools and techniques of database management, application development, and analytical assessment, to address geographic information requirements, issues of importance to the environment, and to answer questions with a spatial/global perspective. Resources for this course include the Environmental Studies Center of Qatar University, where GIS is used effectively in a range of environmental issues, as well as ongoing research in the Department of Geography.

## BIOL 503

### Experimental Design and Statistical Analysis

#### Credit Hours: 3

To have a successful career in environmental science, it is essential for graduates to acquire an understanding of the principles of experimental design and statistics, including the ability to both obtain a critical appraisal of current knowledge, as well as develop a statistically valid framework and design for



research. The primary purpose of this course is to provide a firm basis in experimental design, as well as an understanding of the reasoning of statistics, which allows students to design, complete, and critique their own research. The course gives students the opportunity to apply these principles through analysis of data, and allows them to review critically, literature of relevance to their area of research. Students study these concepts in a practical sense through analysis of data from case studies.

## **BIOL 504**

### **Environmental Chemistry**

#### **Credit Hours: 3**

This course covers current analytical techniques, and the scientific background and skills needed for research in environmental chemistry. Topic areas include the development of advanced technologies and materials for air and water purification and for the saving and storage of energy, water and air pollution control, soil and sediment remediation, environmental technology, chemical limnology, and groundwater chemistry. Students design mass and energy flows and quantify matter transformations, in particular those of pollutants; analyze scientific literature; describe and evaluate the role of compounds and processes in soil, water and air at the molecular-mechanistic level; identify effects and toxicity of pollutants on living organisms; and evaluate methods for studying of eco-toxicology and risk assessment.

## **BIOL 505**

### **Graduate Seminar in Environmental Science**

#### **Credit Hours: 1**

The graduate seminar is graded P/F and is compulsory for all students in the M.Sc. program. The seminar is presented once per week, and is designed so that during the progress of the semester, different speakers present information on a range of topics, which provides a comprehensive survey of Environmental Science. Grading is based upon attendance, short on-line quizzes and preparedness. The important feature of the seminar is that it not only provides a critical appraisal of salient environmental issues, it also serves to help students make informed choices when they select elective courses. For example, students may select an elective based upon interest generated in a talk in the seminar. Also, by declining to take some electives, students should not compromise their holistic appreciation of environmental issues, since they are exposed to a spectrum of topics in the seminar. All reading materials,

case studies, and instructional content are available online. Students read the material for each topic, and take a self-paced quiz to test their comprehension of the material before the presentation in which the material is discussed. In-depth debate of the seminar topic and materials is encouraged. The responsibility for organizing the seminar is on a rotating basis within the faculty of DBES.

## **BIOL 506**

### **Microbiological Processes in Environmental Systems**

#### **Credit Hours: 3**

This course focuses on microbiological processes that may be applied to a broad range of environmental concerns. Wastewater Characteristics, Chemical and Biochemical Oxygen Demand, Kinetics of Suspended Growth Biological Processes, Kinetics of Attached Growth Biological Processes, Nitrification, Denitrification, Biotransformation of Hazardous Compounds are some of the topics covered in this course.

## **BIOL 507**

### **Regulation, the Environment and Qatar Public Policy**

#### **Credit Hours: 3**

The Qatar National Vision 2030 (QNV 2030), launched in October 2008 by His Highness Sheikh Tamim bin Hamad Al Thani, Heir Apparent, defines long-term development outcomes for Qatar, and provides a framework within which national development strategies and implementation plans can be prepared. QNV2030 is taken as the basis for this course, upon which the regulatory framework of the State of Qatar is based. In large part, the consideration of the latter, and relevant laws, is considered from the content of Decree of Law No. (30) in the year 2002: Issuance Law of Environment Protection. This includes due consideration of the law and regulations that pertains to topics such as: conservation of petroleum resources, agricultural quarantine, exploitation and protection of live sea resources, animal's health, public and private real estates, organization of excavation of groundwater wells.

## **BIOL 510**

### **Internship/Technical Report**

#### **Credit Hours: 3**

This internship course should be conducted in industry, governmental or a non-governmental organization (NGO). It refers to a research project that the student undertakes to generate results. Upon conclusion of the project, the student shall prepare, present and defend a final report on the project.

## **BIOL 511**

### **Environmental Health & Safety**

#### **Credit Hours: 3**

The course gives a comprehensive overview of modern health and safety practices in a wide range of work environments. A major objective of the course is to consider the legislative and practical basis that underpins practices in the work environment and to allow students to examine critically workplace conditions and risk management policies. As in other courses of the program, special emphasis is placed upon ISO certification guidelines, as well as case histories and relevant examples in Qatar; this is particularly relevant for those students who complete an internship.

## **BIOL 512**

### **Environmental Bioethics**

#### **Credit Hours: 3**

The approach taken in this course is from a philosophical perspective. Current literature, debate and discussion is used extensively in this course to focus on many issues in the bioethics of the environment, such as the theory of general ethics, human relationships, nature, the built environment, global change, ecological risks associated with bio-engineered crops and livestock, reproductive health and the environment, infectious disease, environmental change, and effects on national security and development, environmental concerns, moral and political reasoning in environmental practice. Students are encouraged to consider the question: How can one implement philosophy to achieve progress in solving environmental problems?

## **BIOL 513**

### **Epidemiology**

#### **Credit Hours: 3**

The objective of this course is to develop a comprehensive understanding of basic concepts and methods in contemporary epidemiology. The essential part of the course deals with methodology and basic concepts, including the methods used to measure disease occurrence and association; design of epidemiological studies; the role of bias and confounding; working with data, statistical analysis of data-sets and application of these by computer; epidemiological theory and practice. The course focuses on communicable and non-communicable diseases in developed and developing countries. The use of statistical software is an important skill for the epidemiologist and students complete a number of exercises with available computer programs.

## **BIOL 514**

### **Inte. Environmental Law**

#### **Credit Hours: 3**

Students are introduced to international environmental law by considering the events that can lead to environmental protection. An emphasis is on international legal issues. The role of the United Nations in international law is also considered. An important aspect of the course is the use of case studies (oil spills, biohazards, deforestation, etc.). Other topics considered include the use of nuclear energy, laws for the protection of the environment, conservation and consequences of war and armed conflict.

## **BIOL 515**

### **Air Pollution**

#### **Credit Hours: 3**

The course considers the basic science of the atmosphere, both its physics and its chemistry, and how this is applied to understanding air pollution and its dispersal. Of fundamental importance in the course is, understanding the consequences of air pollution for living systems; including life in aquatic environments, as well as the effects of air pollution on human and animal physiology. The course explains the causes and the effects of air pollution, its management at the local (Doha), national (Qatar) and international levels, and those controls that are used to reduce emissions from industry and transport.

## **BIOL 517**

### **Envr. Biosafety & Biosecurity**

#### **Credit Hours: 3**

The course focuses on key aspects of biosafety and biosecurity, including the biological risk factors affecting the environment and biodiversity, and the strategies available for improving biosafety and biosecurity. Principal topics covered include the different types of biological risk factors associated with the environment; how to enhance knowledge and to understand biological safety issues in the environment; and risk assessment. Students study the best practices for studying biosafety and biosecurity issues; how to influence and support emerging legislation and standards in the areas of biological safety, biosecurity, biotechnology, transport and associated activities. The course covers topics as diverse as the storage of nuclear waste and nuclear weapons, food security, and biological weapons.

## **BIOL 518**

### **Water & Human Development**

#### **Credit Hours: 3**

On completion of this course, students are expected to be able to: 1) Explain the principles, concepts and methods pertaining to national and international water and environmental laws, and common and needed institutional management practices. 2) Pursue - either independently or in a multidisciplinary team - relevant research in the area of water quality management, including the design of research questions, hypotheses and experimental approaches, selection and application of appropriate research methods and techniques, and summation of sound conclusions and recommendations. 3) Identify the consequences (relating to water resources) of human activities as well as available options for remediation, under different levels of environmental perturbation and in different socio-economic contexts.4) Successfully design and optimize water quality monitoring and assessment schemes in the watershed, and interpret the consequences, for example, by using statistical and modeling tools acquired through different courses of the program. Examples are drawn from around the world.

## **BIOL 520**

### **Envi. Toxicology & Pollution**

#### **Credit Hours: 3**

The course provides advanced training in environmental toxicology, monitoring techniques. The course should be taken with courses on international law and environmental legislation in Qatar. The course aims to fulfill the demand for trained personnel in the environmental regulatory agencies in Qatar, in companies subject to such regulation, and those involved in providing support services such as monitoring and consultancy with regard to environmental matters. Topics covered in the course include: mechanisms of toxicity in humans, the setting environmental quality standards, the fate of contaminants in water, air and desert soils, toxicity contaminants in the environment, and legislative controls on contaminants.

## **BIOL 521**

### **Mari. Envi. & Human Deve**

#### **Credit Hours: 3**

The course focuses on key aspects of the interface between human development and environmental sustainability of the marine environment, including the influence of economic growth, social development and environmental management; sustainable use and access to water; management and conservation of the marine environment; and the influence of climate change on human development. The major environmental challenges that Qatar faces and that need to be resolved effectively are considered, particularly achieving water security, reducing carbon emissions, increasing energy efficiency, and reducing risks that threaten the safety of the marine environment. Cross-reference to other courses dealing with regulatory and policy issues is emphasized.

## **BIOL 522**

### **Rene.Energy Reso.&Global Chan.**

#### **Credit Hours: 3**

The course focuses on worldwide concerns about climate change, renewable energy supply, the carbon economy, sustainable management of water and solid resources, and hydrogen and biofuels for the future. Students study the generation and provision of renewable energy, hydrogen, water, wastewater treatment and solid wastes management, solar energy, wind power, bioconversion of biomass and pollutants, valorization of environmental resources, production of bioenergy, and the different generations of biofuels. Emphasis is also placed on regulation, policy and legislation, such as the Kyoto protocol, and special needs and

problems such as those of the aviation industry and the effects of global warming on human activities.

## **BIOL 523**

### **Biol. Cons.& Biod. in Qatar**

#### **Credit Hours: 3**

Conservation and the study of biological diversity are key aspects of the 2030 sustainability vision for Qatar; a theme that is considered in many courses of the M.Sc. program. This course on biological conservation in Qatar examines the principles of human interactions with the environment. We take advantage of Qatar University being situated in Qatar's capital city, Doha, and promote contributions from leading experts from a range of government ministries, research and not-for-profit organizations located here. The world's human population exerts a profound influence on the environment, its flora, fauna, and their habitats, no more so than here in the Gulf. This is reflected in a decrease in those areas unexploited by man and industry. Furthermore, social and governmental pressures promote use of land for agriculture, ecotourism, sports, meat production and conservation. These diverse requirements can only be managed through an appreciation of population biology, habitat and species management, fisheries, genetics and landscape ecology. A solid understanding of the theoretical side of an issue must be coupled with equally important practical considerations. Future conservation managers in Qatar have a critical role to play in the country.

## **BIOL 524**

### **Envi. Geno & Bio-Eng**

#### **Credit Hours: 3**

It is becoming clear, from the application of the techniques of metagenomics, that biological diversity on Earth is vast and far greater than previously anticipated. Environmental Genomics and Engineering consider the use and improvement of engineering methods and skills that are needed to understand genomic complexity in different environments, including extreme ones; how to exploit such genomic complexity for human benefit; the contents of the genomes of all living systems existing in the environment, as well as their continuous plasticity driven by environmental stresses. The elucidation of many genomes and particularly those existing in particular environments is widely believed to be the basis for one of the most important expansions of human knowledge and activity in the 21st century. All such expansions require engineering activity, genomic engineering and capacity

building. Further topics include: Functional genomics is the major approach to understanding how genomes of organisms influence their activities, depending on the environmental conditions. Proteomics and metabolomics study the functions of proteins and metabolites, and this information, in turn, shows how and why the function and morphology of cells come to be.

## **BIOL 525**

### **Solid Waste Management**

#### **Credit Hours: 3**

This course deals with solid waste handling worldwide, and specifically in the Gulf region, through lectures, case studies, assignments and field visits. The course covers the different types of waste with a primary focus on treatment and disposal techniques and the underlying principles of management options, environmental impact, and problems associated with activities such as open dumping, landfill, composting, incineration, and non-incineration thermal techniques. Specific topics include problems associated with household hazardous wastes, demolition waste, domestic waste, sewage sludge and municipal waste, agricultural waste, and construction site waste. Students are taught how to evaluate ground water pollution and options for protection at disposal sites; susceptibility of aquifers to contamination; computer modeling of how pollutants reach groundwater; designs of ground water protection systems at hazardous waste disposal sites and facilities; biological warfare.

## **BIOL 530**

### **Graduate Research and Thesis**

#### **Credit Hours: 3 OR 6**

This is a mandatory course for the Thesis Plan only. It refers to the actual research that the student undertakes to generate results sufficient to warrant the production and defense of a formal thesis. The intensive research necessary for the research thesis will normally be completed in the 2 last semesters.



## **BIOL 600**

### **Advanced Graduate Seminar**

#### **Credit Hours: 3**

Gives an in-depth review of modern topics in the biological and environmental science fields. It enables students to review the research literature and provide discussions on the topics. These seminars emphasize contextual and integrated understanding, analysis and synthesis, conflicts and ethical issues, enhanced communication and teamwork.

## **BIOL 601**

### **Advanced Biostatistics**

#### **Credit Hours: 3**

The course focuses on advanced topics in data analysis for the biological sciences, including multivariate techniques, spatial and temporal analysis, and motion and image analysis. A large section will be geared towards the particular needs of the students enrolled in the course. Laboratory exercises will provide hands-on experience for these concepts.

## **BIOL 602**

### **Lab Rotation I**

#### **Credit Hours: 3**

The course will provide the student with research experience at lab of their interest that will help them to gain experience needed to conduct their thesis research work. They should submit a lab report at the end of the semester .

## **BIOL 603**

### **Lab Rotation II**

#### **Credit Hours: 3**

The course will provide the student with a research experience at lab of their interest that will help them to gain experience needed to conduct their thesis research work. They should submit a lab report at the end of the semester .

## **BIOL 604**

### **Adv. Molecular & Cell Biology**

#### **Credit Hours: 3**

The course will provide students with the theoretical basis for appreciating and understanding the basic principles and methodologies of modern molecular biology through lectures and discussions of the current scientific literature. The course is designed to integrate basic concepts of molecular biology with fundamental topics in other areas of cellular biology, biochemistry, microbiology, and molecular genetics. The course integrates advanced concepts of cellular biology with general topics in the areas of biochemistry, genetics and molecular biology, and covers topics in the research literature on current understandings of the structure, function and biogenesis of macromolecules and cellular organelles, cell membrane, the cytoskeleton network, membrane transport mechanisms, cell surface and intracellular communication, energy requirements for cellular activities, and synthesis and sorting in the normal and disease states. The experimental technologies used in these studies will be discussed.

## **BIOL 605**

### **Advanced Toxicology**

#### **Credit Hours: 3**

This course provides advanced training on the impacts of xenobiotics upon different ecosystems; description of ecological changes resulting from a variety of human activities which involve release of xenobiotics into the environment. The students are required to have a deep understanding of biochemical activity of xenobiotics at the molecular level. The course aims at providing students with empirical training relating to the toxicity of various classes of chemicals for living organisms; interactions between toxic substances and enzymatic systems; interpretation and monitoring of Qatari environmental and health regulations; and assessment of mechanisms of exposure to toxic chemicals.

## **BIOL 606**

### **Marine Sciences**

#### **Credit Hours: 3**

This course examines the broad and multidisciplinary approach to marine and aquatic life and the biological processes in shallow coastal waters and the open ocean. It

examines and quantifies organismal physiological response to the abiotic and biotic environment. Aspects of population and community structure, reproduction and larval biology, and marine production systems are also examined

## **BIOL 607**

### **Earth and Ecosystems**

#### **Credit Hours: 3**

This course will deal with the interaction of the earth and its ecosystems with particular relevance between the physical and biological components that may or may not be influenced by humans

## **BIOL 608**

### **Advanced Biotechnology**

#### **Credit Hours: 3**

This course introduces the student to the advanced principles, applications, strategies, and societal concerns of molecular biotechnology. Students will learn the application of novel biotechnology techniques in solutions to various environmental problems.

The course examines the use of biotechnology techniques and methods for the analysis and solution of environmental problems. Areas of particular interest include the use of novel microorganisms for applications in the removal of pollutants, toxic chemicals, and hazardous wastes from the environment.

## **BIOL 609**

### **Molecular Genetics**

#### **Credit Hours: 3**

This course dissects in depth the various paradigms in genetic research and analysis. Special attention will be given to the complex interaction between genes and environment and how such interaction defines the resulting phenotype, especially in eukaryotic systems. Other topics include global expression, epigenetics, metabolic profiling, and comparative genomics.

## **BIOL 610**

### **Epidemiology**

#### **Credit Hours: 3**

This course focus on methods to study relations between exposure to environmental agents (for example air pollutants and metals) or conditions (heat waves) and effect markers, symptoms, morbidity and mortality in population and subgroups. It also describes how to use the information from epidemiological and toxicological studies in risk assessment and environmental health impact assessment.

## **BIOL 611**

### **Environmental Chemistry**

#### **Credit Hours: 3**

This course covers current analytical techniques, and the scientific background and skills needed for research in environmental chemistry. Topic areas include the development of advanced technologies and materials for air and water purification and for the saving and storage of energy, water and air pollution control, soil and sediment remediation, environmental technology, chemical limnology, and groundwater chemistry. Students design mass and energy flows and quantify matter transformations, in particular those of pollutants; analyse scientific literature; describe and evaluate the role of compounds and processes in soil, water and air at the molecular-mechanistic level; identify effects and toxicity of pollutants on living organisms; and evaluate methods for studying of ecotoxicology and risk assessment.

## **BIOL 612**

### **Envi. Planning & Risk Manag.**

#### **Credit Hours: 3**

This course focuses on environmental planned approaches to identify, risk manage and resolve environmental issues; and determine social impacts of small and large-scale projects that responds to the diverse and evolving character of environmental planning. Location, form, pattern and functioning of human communities in relation to the natural environment is stressed. The course combines theoretical and case studies dimensions of environmental planning and risk management in relation to Qatar and the region.

## **BIOL 613**

### **Geospatial Methods**

**Credit Hours: 3**

This course introduces students to techniques for the statistical analysis of spatial data. The course covers issues in characterizing spatial data, methods and problems in spatial data sampling, techniques for visualizing, exploring and modeling spatial data including techniques for point patterns, continuous data, area data, and spatial interaction data.

## **BIOL 614**

### **Systems Physiology**

**Credit Hours: 3**

This course is designed to study organ systems physiology in an integrated approach. Molecular and cellular aspects are given highest attention and are discussed using primary literature as a major source. The body's integrative responses to physiological stressors/mechanisms are dissected.

## **BIOL 615**

### **Plant Physiology**

**Credit Hours: 3**

The course covers important processes that are important to the normal functioning of plants.

## **BIOL 616**

### **Biodiversity**

**Credit Hours: 3**

This course will consist of the explanation of biodiversity and its role in ecosystems and human managed systems. Biodiversity of animal and plant life will be discussed and quantified in both local ( Qatar) and international environments.

## **BIOL 617**

### **Special Topic I**

**Credit Hours: 3**

Course subject matter will be determined by the needs of the students in the program and the availability of instructors

## **BIOL 618**

### **Special Topic II**

**Credit Hours: 3**

Course subject matter will be determined by the needs of the students in the program and the availability of instructors

## **BIOL 619**

### **Molecular Basis of Diseases**

**Credit Hours: 3**

This course discusses molecular and cellular aspects of pathogenetic mechanisms. It also discusses novel approaches employed to better understand these diseases as well as focuses on new therapeutic mechanisms for such pathologies. Special attention will also be given to cellular mechanisms involved in cell injury and tissue damage in model diseases as cancer, obesity, and cardiovascular pathologies.

## **BIOL 620**

### **Bioinformatics**

**Credit Hours: 3**

The course focuses on the theory and practice of computational Biology. Topics include but are not limited to: BLAST, sequence alignment, DNA computational tools, phylogenetic analysis, structure prediction of RNAs and proteins.

## **BIOL 69**

### **PhD Thesis**

## **Credit Hours: 45**

After the students pass their qualifying exam they should start thesis research work. This course is for 45 CH or research and preparation of PhD dissertation.

## **BIOL 701**

### **Advanced Biostatistics**

**Credit Hours: 3**

The course focuses on advanced topics in data analysis for the biological sciences, including multivariate techniques, spatial and temporal analysis, and motion and image analysis. A large section will be geared towards the particular needs of the students enrolled in the course. Laboratory exercises will provide hands-on experience for these concepts

## **BIOL 702**

### **Lab Rotation I**

**Credit Hours: 0 TO 6**

The course will provide the student with research experience at lab of their interest that will help them to gain experience needed to conduct their thesis research work. They should submit a lab report at the end of the semester .

## **BIOL 703**

### **Lab Rotation II**

**Credit Hours: 0 TO 6**

The course will provide the student with a research experience at lab of their interest that will help them to gain experience needed to conduct their thesis research work. They should submit a lab report at the end of the semester

## **BIOM 501**

### **Medical Laboratory Science I**

**Credit Hours: 3**

An intensive, didactic and clinical curriculum in the field of Biomedical Sciences. Areas covered include: Hematology/Coagulation/Urinalysis and Body Fluids (includes Special Hematology/Coagulation); Chemistry (includes Special Chemistry/Immunology/Serology); and Phlebotomy & Lab Safety.

## **BIOM 502**

### **Medical Laboratory Science II**

**Credit Hours: 3**

An intensive, didactic and clinical curriculum in the field of Biomedical Sciences. Areas covered include: Immunohematology [Blood Bank]; and Microbiology, Virology, Mycology, Parasitology, and Molecular Pathology.

## **BIOM 510**

### **Pathophysiology**

**Credit Hours: 3**

This course provides an in-depth study of human pathological processes and their effects on homeostasis. Emphasis is on interrelationships among organ systems in deviations from homeostasis. Upon completion, students should be able to demonstrate a detailed knowledge of pathophysiology. Course topics include the ethiology, physical signs and symptoms, prognosis, and complications of commonly occurring diseases and their management

## **BIOM 515**

### **Molecular Diagnostics**

**Credit Hours: 3**

This course covers the principles of molecular technology and techniques used in clinical and research laboratories. Topics include: nucleic acid chemistry, nucleic acid extraction and hybridization; target, signal and probe amplification; microarrays and in-situ hybridization. Quality assurance and control issues used to monitor molecular tests are addressed.



<b>Prerequisite</b>	
<b>BIOM 510</b>	
<b>BIOM 520</b>	
<b>Principles of Laboratory Mang.</b>	
<b>Credit Hours: 3</b>	
This course provides a foundation in the technical and non-technical aspects of supervising and managing clinical laboratory testing services within the current health care delivery system.	
<b>BIOM 530</b>	
<b>Currt. Issues in Clin. Lab. Sc</b>	
<b>Credit Hours: 3</b>	
The course covers current topics in the field such as clinical laboratory testing within the context of the current health care delivery system, the influence of other aspects of society, accreditation of laboratories, financial management, information systems management, management of the quality of clinical laboratory testing, leadership and communication skills, and ethics in the clinical laboratory testing environment. The emphasis of the course is on the knowledge, skill, and attitudes needed to work successfully in a health care setting at the entry-level and beyond.	
<b>Prerequisite</b>	
<b>BIOM 520</b>	
<b>BIOM 540</b>	
<b>Res. Methods in Biom. Sciences</b>	
<b>Credit Hours: 3</b>	
This course provides the student with a working knowledge of research methods for collecting, analyzing, and interpreting healthcare data and an appreciation of the value and application of these methods in healthcare organizations. Students will learn to distinguish between types of research	

(quantitative and qualitative) with an emphasis on the use of quantitative analysis in healthcare organizations. Basic research methods are described, including surveys, observational studies, experimental and quasi-experimental design; and the use of primary and secondary data sets. Statistical techniques for analyzing and interpreting data will include descriptive statistics, hypothesis testing, probability, sampling, t-tests, ANOVA, chi-square analysis, correlation, linear regression, and multiple regression

<b>Prerequisite</b>	
<b>BIOM 520</b>	
<b>BIOM 550</b>	
<b>Medical Lab. Laws &amp; Ethics</b>	
<b>Credit Hours: 3</b>	
This advanced level courses covers licensure and accreditation, compliance and risk management concepts and practices as applied to medical laboratory operations. Accreditation standards as required by international agencies is included. The course also provides the student with an understanding of law, regulation, and court decisions that affect healthcare organizations as well as the ethical underpinnings and principles that healthcare organizations follow in the delivery of services.	
<b>BIOM 610</b>	

<b>Medical Lab Financial Operation</b>	
<b>Credit Hours: 3</b>	
This advanced level course covers the entirety of financial management as practiced in the medical laboratory or biomedical research laboratory setting. It includes capital equipment acquisition, cash flow analysis, contract negotiations, cost analysis, inventory control, revenue and cost-accounting practices, salary and wage management, and material management in the context of the laboratory budget.	

<b>Prerequisite</b>	
<b>BIOM 520</b>	

<b>BIOM 620</b>	
<b>Health Informatics</b>	
<b>Credit Hours: 3</b>	
This course addresses the importance of information systems and information technology in improving decision-making in healthcare organizations. The student will be exposed to the need for and uses of information technology in healthcare organizations, and how integrated, computer-based information systems can lead to decisions that improve and better coordinate care, allow for better management of medical records and orders, increase the timeliness of care, improve cost controls, enhance supply inventory and management, and improve vendor contracting and management.	
<b>Prerequisite</b>	
<b>BIOM 510 AND BIOM 520</b>	

<b>BIOM 630</b>	
<b>Quality Assu. &amp; Outcome Asses.</b>	
<b>Credit Hours: 3</b>	
This advanced level course covers the breadth and depth of various quality management, performance improvement and assurance theory, principles and practices (CQI, TQM, ISO, etc.) as specifically applied to medical and research laboratories.	

<b>BIOM 650</b>	
<b>Pathogenic Microbiology</b>	
<b>Credit Hours: 3</b>	
The fundamentals of microbial physiology, genetics and immunology are presented with important bacterial, viral, parasitic and mycotic infections discussed from the standpoint of etiology, epidemiology, and pathogenesis and laboratory diagnosis.	

<b>Prerequisite</b>	
<b>BIOM 510</b>	
<b>BIOM 651</b>	
<b>Viral Pathogenesis &amp; Diagnosis</b>	
<b>Credit Hours: 3</b>	
This course covers the advanced study of viruses with regard to the basic, biochemical, molecular, epidemiological, clinical, and biotechnological aspects of animal viruses primarily and bacteriophage, plant viruses, viroids, prions, and unconventional agents secondarily. Specific areas of virology, including viral structure and assembly, viral replication, viral recombination and evolution, virus-host interactions, viral transformation, gene therapy, antiviral drugs, and vaccines, are presented. The major animal virus families are discussed individually with respect to classification, genomic structure, virion structure, virus cycle, pathogenesis, clinical features, epidemiology, immunity, and control. The viral vectors and their applications in biotechnology are discussed.	

<b>Prerequisite</b>	
<b>BIOM 510</b>	
<b>BIOM 660</b>	
<b>Biochemistry</b>	
<b>Credit Hours: 3</b>	
Clinical aspects of biochemistry, including overview of principles and instrumentation with emphasis on practical laboratory application of analytical procedures, specimen collection and handling, significance of results, and quality assurance. Includes analysis of blood and other body fluids for blood gas content, electrolytes, enzymes, hormones, therapeutic drugs, toxicology, and other constituents of clinical interest, utilizing both automated and manual techniques	

<b>Prerequisite</b>	
<b>BIOM 510</b>	

## **BIOM 530**

### **Current Issues in Clinical Laboratory Science**

#### **Credit Hours: 3**

The course covers current topics in the field such as clinical laboratory testing within the context of the current health care delivery system, the influence of other aspects of society, accreditation of laboratories, financial management, information systems management, management of the quality of clinical laboratory testing, leadership and communication skills, and ethics in the clinical laboratory testing environment. The emphasis of the course is on the knowledge, skill, and attitudes needed to work successfully in a health care setting at the entry-level and beyond.

## **BIOM 540**

### **Research Methods in Biomedical Sciences**

#### **Credit Hours: 3**

This course provides the student with a working knowledge of research methods for collecting, analyzing, and interpreting healthcare data and an appreciation of the value and application of these methods in healthcare organizations. Students will learn to distinguish between types of research (quantitative and qualitative) with an emphasis on the use of quantitative analysis in healthcare organizations. Basic research methods are described, including surveys, observational studies, experimental and quasi-experimental design; and the use of primary and secondary data sets. Statistical techniques for analyzing and interpreting data will include descriptive statistics, hypothesis testing, probability, sampling, t-tests, ANOVA, chi-square analysis, correlation, linear regression, and multiple regression.

## **BIOM 620**

### **Health Informatics**

#### **Credit Hours: 3**

This course addresses the importance of information systems and information technology in improving decision-making in healthcare organizations. The student will be exposed to the need for and uses of information technology in healthcare organizations, and how integrated, computer-based information systems can lead to decisions that improve and better coordinate care, allow for better management of medical records and orders, increase the timeliness of care,

improve cost controls, enhance supply inventory and management, and improve vendor contracting and management.

## **BIOM 665**

### **Special topics in Biomedical Science I**

#### **Credit Hours: 3**

This professor guided course is designed to present master students to the philosophies of critical thinking and to provide instructional and learning opportunities for them to apply critical thinking strategies to given specified content areas within advanced biomedical science. It incorporates self-directed learning and teamwork in an atmosphere of active learning.

## **BIOM 665**

### **Special topics in Biomedical Science II**

#### **Credit Hours: 3**

This professor guided course is designed to present master students to the philosophies of critical thinking and to provide instructional and learning opportunities for them to apply critical thinking strategies to given specified content areas within advanced biomedical science. It incorporates self-directed learning and teamwork in an atmosphere of active learning.

## **BIOM 670**

### **Principles of Immunochemistry**

#### **Credit Hours: 3**

This course is based on theoretical and experimental applications of immunochemistry and immunobiology.

#### **Prerequisite**

#### **BIOM 660**

## **BIOM 675**

### **Immunology & Serology**

#### **Credit Hours: 3**

Performance and interpretation of a broad range of clinical serological and immunological procedures with emphasis on principles and clinical correlation. Formal lecture series included.

#### **Prerequisite**

#### **BIOM 510**

## **BIOM 680**

### **Oncology**

#### **Credit Hours: 3**

The course provides an overview of cancer biology, including tumor/host interactions, metastasis and invasion, tumor cell biochemistry, tumor heterogeneity, tumor cell surfaces and developmental aspects.

#### **Prerequisite**

#### **BIOM 510**

## **BIOM 681**

### **Advanced Hematology**

#### **Credit Hours: 3**

Principles, theories, and instrumentation related to qualitative and quantitative evaluation of cellular elements of blood and other body fluids; factors of hemostasis; quantitative chemical analysis of urine; and renal function studies. Emphasis is placed on microscopic identification of cells and the significance and correlation of laboratory data.

## **Prerequisite**

### **BIOM 680**

## **BIOM 682**

### **Advanced Immunohematology**

#### **Credit Hours: 3**

Theory and practice in blood bank operation, including identification of erythrocyte antigens and antibodies and their normal and abnormal immunology. Standard technical practices are used in evaluating blood typing, cross-matching, antibody detection, and preparation of blood components for transfusion. Safety control methods standard to efficient blood banking.

#### **Prerequisite**

#### **BIOM 680**

## **BIOM 695**

### **Capstone in Lab. Mang.**

#### **Credit Hours: 3**

The Capstone seminar serves as the culminating educational experience in the program. Students use the knowledge they have gained in the courses to complete a project. This process requires an in-depth knowledge of laboratory management.

## **BIOM 696**

### **Clinical Internship**

#### **Credit Hours: 3**

This course is supervised rotation in a clinical laboratory. The student will perform assays, apply quality control, interpret results and correlate results with the clinical condition. The rotation will include preventive and corrective maintenance on instruments and equipment used in the laboratory.



## **BIOM 697**

### **Capstone in Advanced Practice**

#### **Credit Hours: 3**

The Capstone seminar serves as the culminating educational experience in the program. Students use the knowledge they have gained in the courses to complete a project. This process requires an in-depth knowledge of laboratory science.

#### **Prerequisite**

## **BIOM 696**

## **BIOM 698**

### **Thesis I**

#### **Credit Hours: 3**

Basic research in a field of interest under faculty direction

## **BIOM 699**

### **Thesis II**

#### **Credit Hours: 3**

In this course, students will use the knowledge and clinical skills they have acquired in their courses to prepare a written manuscript that is suitable for publication. The paper will include relevant literature review and include the following: abstract, introduction, methods and materials, statistics, results, discussion, conclusion and references. Students will present the study to students and faculty at the conclusion of the program.

#### **Prerequisite**

## **BIOM 698**

## **BIOM 700**

### **Advanced Research Methods**

#### **Credit Hours: 3**

A doctoral research tools course that provides a background and analysis of the interpretive act in all educational research. Designed to provide an in-depth study of the process of conducting research in the naturalistic paradigm, the course focuses on an examination of the major methodological traditions of this approach to research. Also included are the terminology and a consideration of the distinctions between the naturalistic and the rationalistic, or quantitative, methods of inquiry.

## **BIOM 710**

### **Cellular and Molecular Basis of Disease**

#### **Credit Hours: 3**

The understanding of causes of disease at the cellular and molecular levels is primordial for the future identification of potential therapeutic targets and strategies. It gives a greater understanding of the rationale for diagnosis of the disease and its treatment. The aim of this course is to provide an understanding of the major cellular and molecular changes which are the underlying cause of a variety of diseases such as cancer and metabolic, cardiovascular and genetic disorders. Students will gain an in-depth grasp of the current areas of research related to understanding the molecular and cellular mechanisms underpinning disease onset and progression and to integrate information from a variety of primary sources.

## **BUAD 800**

### **Epistemology**

#### **Credit Hours: 3**

The aim of this course is to present major schools of thought related to the nature of knowledge production. The concept of validation of what is called scientific results will be discussed from different points of view. We will focus on epistemological debates related to the Business Administration Body of Knowledge and on how new evidences can be generated and validated. The course will provide Ph.D. students with tools to evaluate the importance and the evolution of different scientific discoveries in the area of Business Administration and will introduce them to the synthesis of the reciprocal relationship between philosophy and practice. A history of the scientific methodology will be reviewed.

## **BUAD 801**

### **Research Methodology**

#### **Credit Hours: 3**

This course exposes Ph.D. students to a wide range of research methods used in social science. The procedures of different methods, along with their strengths and weaknesses, will be illustrated with examples of published research. Students will apply an appropriate research method to a business topic of their choice and develop a first-cut research proposal.

## **BUAD 802**

### **Doctoral Research Seminar**

#### **Credit Hours: 3**

The main objective of this course is to expose the Ph.D. students to the new research developments within the different specializations. From each specialization, an active faculty-researcher will be invited to present his/her main research output. The invited faculty-researchers will talk about various aspects of their research and their research program. Following the faculty presentations, the students will discuss the main findings of the faculty research. This seminar will be a scientific forum where the students can engage classmates and professors in discussions about the research process and to be aware how to produce knowledge in the field of Business Administration. The Ph.D. students will comment the papers provided by the visiting faculty. They will also make a formal conference style presentation of their research proposal. The proposal should represent the students' own research ideas. This course will help the students to build their research community by engaging fully in class discussions with fellow students and faculty.

## **BUAD 803**

### **Paramteric Analysis**

#### **Credit Hours: 3**

This course focus on methods of analyzing mean and covariances structures. Topics include commonly correlation and regressions analysis, applied multivariate methods such as multiple analysis of variance (one way ANOVA, multiway ANOVA, ANCOVA, repeated measures, multivariate ANOVA), logistic regression, dscriminant analysis, profile analysis, factor analysis (principal component analysis) and cluster

analysis. Many empirical applications are made using SPSS software.

## **BUAD 804**

### **Non-Parametric Analysis**

#### **Credit Hours: 3**

This course provide students with theory and computing tools to perform nonparametric tests including the sign test, Wilcoxon signed rank test, and Wilcoxon rank sum test, Kruskal-Wallis and Friedman tests for one-way and two-way analysis of variance, multiple comparisons, dispersion and independence problems are other nonparametric tests covered. Other topics include estimation methods for nonparametric density and regression.

## **BUAD 810**

### **Graduate Seminar**

#### **Credit Hours: 0**

This course is offered each academic year where the students will attend research seminars from different disciplines. Through this course, they will be exposed to new theoretical developments with the field of business administration. They will also present the progress of their research activities.

## **BUAD 890**

### **Dissertation**

#### **Credit Hours: 0 TO 30**

Once passing the comprehensive exam, each student begins formulating his or her dissertation committee. The Dissertation Committee consists of a minimum of four members. The chair of the Dissertation Committee must be from the major field. At least one member of the committee must be from the research field and one member of the committee must be from outside the major field. With the approval of the ADRG, one of the four members may be an external recognized scholar. Working with the dissertation chair, the student selects and defines a topic in which he or she will significantly show the contribution to the advancement of the body of knowledge. The student then makes a formal Dissertation Proposal to the dissertation committee for approval. Once the dissertation committee approves the student's topic, he or she enters the Candidacy phase. The dissertation must be completed within four years of the comprehensive examination.

## CHME 650

### Transport Phenomena

#### Credit Hours: 3

This course will acquaint the student with important topics in advanced transport phenomena (momentum, heat and mass transport) and the mathematical analysis of transport problems. Topics include laminar and turbulent flow, thermal conductivity and the energy equation, molecular mass transport and diffusion with heterogeneous and homogeneous chemical reactions, as well as flow in/through/cross difference geometries. Focus will be to develop physical understanding of principles discussed and with emphasis on chemical engineering applications.

## CHME 651

### Special Topic I

#### Credit Hours: 3

An advanced course on a specialized topic with high relevance to contemporary issues in the field of Chemical Engineering. The choice of these topics will take into considerations the match between the expertise of available faculty and needs of special knowledge to serve both academic and practical aspects of Chemical Engineering.

## CHME 652

### Special Topic II

#### Credit Hours: 3

An advanced course on a specialized topic with high relevance to contemporary issues in the field of Chemical Engineering. The choice of these topics will take into considerations the match between the expertise of available faculty and needs of special knowledge to serve both academic and practical aspects of Chemical Engineering.

## CHME 653

### Advanced Process Dynamics and Control

#### Credit Hours: 3

Process control plays a central role in the efficient and smooth operation of modern chemical plants. This course comprises review of the basic fundamentals, development of non-linear dynamics of chemical systems/processes, recent advances and applications of conventional and computer based control strategies, and control systems design. Advanced control topics include model predictive control, MIMO control systems design, and analogue vs. digital control systems. Lectures will be accompanied by illustrative examples and subsequent homework exercises.

## CHME 658

### Advanced Thermodynamics

#### Credit Hours: 3

Advanced application of thermodynamic principles. Calculation of thermodynamic properties; ideal and.

## CHME 659

### Advanced Chemical Reaction Engineering & Reactor Design

#### Credit Hours: 3

Advanced study of design and operation of chemical reactors for heterogeneous reactions, batch, cont

## CHME 660

### Advanced Modeling, Control, and Optimization

#### Credit Hours: 3

This course introduces the key challenges associated with the optimization of natural gas processing.

## CHME 661

### Principles of Bioprocess Engineering

#### Credit Hours: 3

Biotechnology and bioprocess engineering. Enzyme catalysis, enzyme kinetics, enzyme inhibition and immobilization.

Microbial growth kinetics, substrate utilization and product formation. Batch, fed batch and continuous cultures, chemostat with recycle and bioreactors in-series. Stoichiometry of microbial growth and product formation. Bioreactor design, optimization and scale-up. Aeration, agitation and oxygen transfer. Biological waste treatment. Downstream processing. Recent developments in bioprocess engineering.

## CHME 662

### Advanced Chemical Engineering Thermodynamics

#### Credit Hours: 3

Advanced thermodynamics course provides a rigorous and advanced foundation in chemical engineering thermodynamics suitable for students interested in graduate study. Course focuses on quantitative study and application of thermodynamic principles including equations of state, properties of ideal and non-ideal solutions, complex physical and chemical.

## CHME 663

### Advanced Corrosion Engineering

#### Credit Hours: 3

This course is related to advanced and contemporary topics in corrosion engineering. Electrochemical.

## CHME 664

### Chemical Engineering process intensification

#### Credit Hours: 3

The course addresses the developments in process intensification and integration in the chemical ind

## CHME 665

### Advanced Special Topics

#### Credit Hours: 3

An advanced course on a specialized topic with high relevance to contemporary issues in the field of.

## CHME 666

### Advanced Application in Gas Processing

#### Credit Hours: 3

This course covers topics related to physical and chemical properties of natural gases; vapor-liquid

## CHME 668

### Downstream gas processing, Analysis, Utilization and Safety

#### Credit Hours: 3

The course provides an overview of the downstream processes of natural gas that involve the principle.

## CHME 669

### Technologies for Gas Produced Water Treatment

#### Credit Hours: 3

Application of following technologies for Gas Produced Water Treatment: settling, electrocoagulation.

## CHME 695

### Master Project

#### Credit Hours: 0 TO 3

This is a one-term project which offers students the opportunity to work on a comprehensive research.

## CHME 750

### Transport Phenomena

**Credit Hours: 3**

This course will acquaint the student with important topics in advanced transport phenomena (momentum, heat and mass transport) and the mathematical analysis of transport problems. Topics include laminar and turbulent flow, thermal conductivity and the energy equation, molecular mass transport and diffusion with heterogeneous and homogeneous chemical reactions, as well as flow in/through/cross difference geometries. Focus will be to develop physical understanding of principles discussed and with emphasis on chemical engineering applications.

**CHME 751****Special Topic I****Credit Hours: 3**

An advanced course on a specialized topic with high relevance to contemporary issues in the field of Chemical Engineering. The choice of these topics will take into considerations the match between the expertise of available faculty and needs of special knowledge to serve both academic and practical aspects of Chemical Engineering. The specific contents of the course are published one semester in advance.

**CHME 752****Special Topic II****Credit Hours: 3**

An advanced course on a specialized topic with high relevance to contemporary issues in the field of Chemical Engineering. The choice of these topics will take into considerations the match between the expertise of available faculty and needs of special knowledge to serve both academic and practical aspects of Chemical Engineering. The specific contents of the course are published one semester in advance.

**CHME 753****Advanced Process Dynamics and Control****Credit Hours: 3**

This course comprises review of the fundamentals, development of non-linear dynamics of chemical

systems/processes, recent advances and applications of conventional and computer based control strategies, and control systems design. Advanced control topics include model predictive control, MIMO control systems design, and analogue vs. digital control systems. Lectures will accompany illustrative examples and subsequent exercises for homework using MATLAB and SIMULINK.

**CHME 761****Bioprocess Engineering****Credit Hours: 3**

Biotechnology and bioprocess engineering. Enzyme catalysis, enzyme kinetics, enzyme inhibition and immobilization. Microbial growth kinetics, substrate utilization and product formation. Batch, fed batch and continuous cultures, chemostat with recycle and bioreactors in-series. Stoichiometry of microbial growth and product formation. Bioreactor design, optimization and scale-up. Aeration, agitation and oxygen transfer. Biological waste treatment. Downstream processing. Recent developments in bioprocess engineering.

**CHME 762****Advanced Chemical Engineering Thermodynamics****Credit Hours: 3**

Advanced thermodynamics course provides a rigorous and advanced foundation in chemical engineering thermodynamics suitable for students interested in graduate study. Course focuses on quantitative study and application of thermodynamic principles including equations of state, properties of ideal and non-ideal solutions, complex physical and chemical equilibria to problems of engineering significance.

**CHME 763****Advanced Reaction Engineering****Credit Hours: 3**

This course is designed to provide advanced techniques required for the design and analysis of reaction engineering and catalytic systems. Following are the major topics covered

in this course: Estimation of reaction rate parameters, Reactor analysis and design, Non-ideal reactors, Chemical kinetic modeling, Homogeneous and heterogeneous reaction systems: catalytic and non-catalytic reactions, Kinetic and transport phenomenon in catalyst design

**CHME 899****PhD Thesis****Credit Hours: 0 TO 48**

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.

**CMPE 651****Advanced Special Topics I****Credit Hours: 3**

The content of these first special topics varies to cover emerging advanced theoretical and practical issues in Computer Engineering. The department must approve the contents of this course as offered per semester. Topics covered in this course must be different from those covered in the course "Advanced special topics II" (CMPE683).

**CMPE 652****Advanced Special Topics II****Credit Hours: 3**

The content of these second special topics varies to cover emerging advanced theoretical and practical issues in Computer Engineering. The department must approve the contents of this course as offered per semester. Topics covered in this course must be different from those covered in the course "Advanced special topics I" (CMPE681).

**CMPS 653****Big Data analytics****Credit Hours: 3**

Understanding how giant software companies and several research institutes cope with the challenges of organizing, processing, and analyzing large-scale data (e.g., petabytes of tweets or DNA sequences). Studying basic scalable techniques of batch and real-time processing. Comparing different frameworks that are currently in wide use through reading and discussion of several research papers. Learning and having hands-on experience on new distributed programming paradigms that represent the state-of-the-art in big data processing. More emphasis on MapReduce, Storm, and Spark.

**Big Data Analytics****Credit Hours: 3**

Understanding how giant software companies and several research institutes cope with the challenges of organizing, processing, and analyzing large-scale data (e.g., petabytes of tweets or DNA sequences). Studying basic scalable techniques of batch and real-time processing. Comparing different frameworks that are current-ly in wide use through reading and discussion of several research papers. Learning and having hands-on experience on new distributed programming paradigms that represent the state-of-the-art in big data processing. More emphasis on MapRe-duce, Storm, and Spark.

**CMPS 899****PhD Thesis****Credit Hours: 0 TO 48**

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.



## CMPT 507

### Advanced Operating Systems

#### Credit Hours: 3

The course covers process concepts, management, and asynchronous concurrency; storage management related to real and virtual storage as well as disk performance optimization; multiprogramming operating systems including process distributed memory, multiprocessors and distributed systems; network communication issues and special purpose systems; network operating systems.

## CMPT 541

### Advanced Computer Networks

#### Credit Hours: 3

Network technologies; packet/circuit switching, switching and routing; packet switch architectures, Interior and Exterior internet routing protocols and their performance; protocol processing. Network control: traffic management, congestion (flow and rate) control, admission control. Applications demanding high-speed communication are included.

## CMPT 542

### Computer Security

#### Credit Hours: 3

This course deals with the advanced issues of computer security and information assurance. It provides students with a deeper understanding of the security topics such as threats, vulnerabilities, intrusion detection, cyber security, security strategic policy, legal and ethical factors in security, security management technologies, tools and practices. It also focuses on several emerging threats including, drive-by-pharming, online extortion, next-generation phishing, multi-application botnets, crimeware, mobile worms, and VoIP security. Emphasis is on secure software models and design, including discovery and prevention of computing systems security vulnerabilities.

## CMPT 543

### Wireless Communication

## CMPT 567

### Wide Area Digital Networking

#### Credit Hours: 3

Introduction to access, transmission, and switching technologies used in high-speed, wide-area digital networks, including the public telephone network, enterprise networks and the internet; topics include integrated services digital network (ISDN) and as required, frame delays, ATM, SONET, and emerging technologies are covered.

## CMPT 571

### Advanced Algorithm Design and Analysis

#### Credit Hours: 3

Design and analysis of problems involving sorting, searching, scheduling, graph theory, and geometry; design techniques such as approximation, branch-and-bound, divide-and-conquer, dynamic programming, greed, and randomization applied to polynomial and NP-hard problems; analysis and space utilization; implementation of algorithms based on advanced data representation techniques and object oriented modeling.

## CMPT 581

### Special Topics in Computing

#### Credit Hours: 3

The content of this course varies to cover emerging theoretical and practical issues in computing. The department must approve the contents of this course as offered per semester.

## CMPT 583

### Special Topics in Network Sys.

#### Credit Hours: 3

The content of this course varies to cover emerging theoretical and practical issues in network. The department must approve the contents of this course prior to the offering each semester.

## CMPT 602

### Advanced Robotics

#### Credit Hours: 3

Advanced robotics concepts, Robotic intelligence and Soft computing, Swarm robots and collaborative learning, Self-Localization and Mapping algorithms (SLAM), advanced concepts related to vision and sensory perception and their integration on a given robotic platform.

## CMPT 603

### Applied Digital Signal Processing

#### Credit Hours: 3

Advanced mathematical concepts in Digital Signal Processing such as higher dimensional transforms, multi-modal system modelling, Time-Frequency analysis, and Deconvolution of signals. Advanced filter designs using Adaptive and non-linear filter designs. Implementation of DSP algorithms in standard platforms.

## CMPT 605

### Advanced Software Engineering

#### Credit Hours: 3

Advanced software engineering beyond software development. Process development planning, analysis and evaluation tasks, such as testing, verification, and validation. Emphasis on the construction and management of internet-oriented and service-oriented architectures and technologies. Series of design and implementation assignments. Discussion of emerging trends and research issues. collaborative filtering, text classification and clustering, social search, learning to rank, and multimedia retrieval.

## CMPT 606

### Advanced Database

#### Credit Hours: 3

The course covers elements of data modeling; relational models and mapping; system architectures; security,

transactions, concurrency control, recovery, query, optimization, and database tuning; hands-on applications on the design and use of database systems.

## CMPT 608

### Advanced Architecture and Design of Computer Systems

#### Credit Hours: 3

Description of computer systems at the system and register transfer levels; computer system models; CPU components such as the control unit, the ALU, integer and floating point processors; memory considerations such as hierarchy, associative memory, virtual memory, memory contention resolution; I/O processors considerations; comparison of well-known architectures.

## CMPT 610

### Embedded Computing Systems

#### Credit Hours: 3

A knowledge of how to design advanced, reliable and real-time embedded computing systems, design of heterogeneous and programmable SoC embedded computing platforms using hardware (HW) software (SW) co-design approaches. This course will emphasize on reconfigurable computing and the integration of custom hardware components with software. Topics to be covered are: Embedded computing systems design, reconfigurable computing, heterogeneous SoC platforms (FPGA, ARM), HW/SW co-design techniques, hardware compilation, Tools for HW/SW co-design, SDK and VIVADO HLS.

## CMPT 611

### Visual Computing

#### Credit Hours: 3

The central theme of this course is to study the fundamental principles of digital processing of visual information, as well as their widespread applications in visual computing discipline. Towards this goal, the course will explore research topics centered on signal, image, or video processing. Throughout this course, visualization, biomedical image processing, vision, computer graphics, digital image processing and machine

learning will be explored to tackle real-world problems in common areas of visual computing.

## CMPT 612

### Network Security

#### Credit Hours: 3

This course seeks to cover a variety of topics in network security relevant to both practitioners and researchers. It may include topics such as cryptography, basic network attacks, port scanning, firewalls, TLS, IPsec, surveillance, privacy, intrusion detection, wireless network security, web applications, and network security tools. Both classic and recent research papers in the area may also be read and discussed with regards to their application to current problems.

## CMPT 621

### Information Retrieval

#### Credit Hours: 3

This course includes Introduction, modeling, retrieval evaluation, query languages, query operations, text and multimedia languages and properties, text operations, indexing and searching, user interfaces and visualization, multimedia information retrieval, searching the web, digital libraries.

## CMPT 622

### Human Computer Interaction

#### Credit Hours: 3

Interface design theories, principles and practices for computer-based systems; methods and tools for developing effective user interfaces; evaluation methods; design of appropriate interface elements including the design of menus and other interaction styles. Psychological and cultural issues in making an interface more appealing to the user are also covered.

## CMPT 623

### Distributed Systems and Cloud Computing

#### Credit Hours: 3

Clients, servers, application servers, database servers, clusters of servers; distributed architectures such as single-tier, two-tier, multi-tier; implementation issues such as performance, security, transactions; enterprise application server capabilities coding, access, and software development tools.

## CMPT 641

### Advanced Computer Networks

#### Credit Hours: 3

Network technologies; packet/circuit switching, switching and routing; packet switch architectures, Interior and Exterior internet routing protocols and their performance; protocol processing, Network control: traffic management, congestion (flow and rate) control, admission control. Applications demanding high-speed communication are included.

## CMPT 642

### Information Security

#### Credit Hours: 3

Computer Security is a broad, cross cutting discipline that impacts multiple area of computing. This course seeks to provide advanced topics in security relevant to both practitioners and researchers. It may include topics such as cryptography, threats, vulnerabilities, intrusion detection, and security policies, legal and ethical factors in security, advanced persistent threats, privacy concerns, network security, security tools, and security best practices. Both classic and recent research papers in the area may also be read and discussed with regards to their application to current problems.

## CMPT 643

### Wireless Communication

#### Credit Hours: 3

This course covers transmission fundamentals; communication networks, protocols, TCP/IP suite; antennas and propagation; signal encoding techniques; spectrum, coding and error control, satellite communications, cellular wireless networks, cordless systems and wireless local loop, mobile IP and wireless access protocol, wireless LAN technology, IEEE 802.11; wireless LAN standard; Bluetooth. Wideband CDMA, Wideband OFDM, and MIMO techniques.

## CMPT 645

### Simulation and Modeling in Computer Networks

#### Credit Hours: 3

Introduction to the probability models, queuing theory, and simulation techniques; event probability, standard discrete and continuous probability distributions; Poisson processes, random number generation; discrete-event system modeling and simulation techniques, statistical estimation, and basic queuing models.

## CMPT 661

### Web Development

#### Credit Hours: 3

Comprehensive introduction to web development with scripting languages currently used in industry; client side and server side development; overview of JavaScript language, embedding JavaScript code in a HTML page; events, multimedia, client side form data validation; dynamic HTML; data transmission between a client and a web server; processing data forms and database connectivity (ODBC or JDBC).

## CMPT 671

### Algorithm Design and Modeling

#### Credit Hours: 3

Design and analysis of problems involving sorting, searching, scheduling, graph theory, design techniques such as approximation, branch- and-bound, divide-and-conquer, dynamic programming, greedy, and randomization applied to polynomial and NP-hard problems; analysis and space utilization; optimization problem modelling implementation

of algorithms based on advanced data representation techniques,

Utilization of solvers to find direct solutions starting from formal problem models.

## CMPT 672

### Enterprise Information systems

#### Credit Hours: 3

Enterprise Information Systems are usually based on packaged software products that drive for cross-functional integration and require organization-wide resources for their implementation. The lifecycle of enterprise information systems includes different phases such as the design, development, deployment, use and evaluation. It involves many actors and needs collaboration platforms between internal IT departments or end-users and external entities (supply chain partners). Enterprise systems impact multiple levels of the enterprise, ranging from the individual members, to the entire organization and even its associated supply chain network. This course is designed to provide a comprehensive insight into theoretical foundations, concepts, tools and current practice of enterprise systems. Project based Enterprise Information system components, such as SAP (ERP), WINDCHILL (lifecycle), REFLEX (WMS) will be used to understand the basic Supply Chain operational information tools.

## CMPT 673

### Machine Learning

#### Credit Hours: 3

The main aim of this course is to nurture a deep understanding of the fundamental principles of machine learning, a discipline that grew out of computer science research on automatically “learning from experience”. The module will cover broad topics such as supervised learning, unsupervised learning, reinforcement learning, and objective evaluation of a machine learning algorithm’s performance. We will cover fundamentals such as instance learning, decision tree learning, Bayesian inference, support vector machines) and also learn about the recent research in the area of machine learning, in particular deep neural networks. Applications to real-world problems.

## CMPT 682

### Special Topics in Computer Science

#### Credit Hours: 3

The content of this course varies to cover emerging theoretical and practical issues in Computer science. The department must approve the contents of this course prior to the offering each semester.

## CMPT 683

### Special Topics in Computer Engineering

#### Credit Hours: 3

The content of this course varies to cover emerging theoretical and practical issues in computer Engineering. The department must approve the contents of this course prior to the offering each semester.

## CMPT 690

### Master Project

#### Credit Hours: 3

Students may choose and pursue an intensive computing project based on a practical computing application derived from industry or other related area. The work culminates in a project report that is evaluated by three committee members including the student project advisor.

## CMPT 695

### Master Thesis

#### Credit Hours: 3 OR 6

Students may choose and pursue a research topic with their respective advisors. The work culminates in a thesis report that is evaluated by three committee members, including the student thesis advisor.

## CMPT 702

### Advanced Robotics

#### Credit Hours: 3

Advanced robotics concepts, Robotic intelligence and Soft computing, Swarm robots and collaborative learning, SelfLocalization and Mapping algorithms (SLAM), advanced concepts related to vision and sensory perception and their integration on a given robotic platform.

## CMPT 710

### Embedded Computing Systems

#### Credit Hours: 3

A knowledge of how to design advanced, reliable and real-time embedded computing systems, design of heterogeneous and programmable SoC embedded computing platforms using hardware (HW) software (SW) co-design approaches. This course will emphasize on reconfigurable computing and the integration of custom hardware components with software. Topics to be covered are: Embedded computing systems design, reconfigurable computing, heterogeneous SoC platforms (FPGA, ARM), HW/SW co-design techniques, hardware compilation, Tools for HW/SW co-design, SDK and VIVADO HLS.

## CMPT 711

### Visual Computing

#### Credit Hours: 3

The central theme of this course is to study the fundamental principles of digital processing of visual information, as well as their widespread applications in visual computing discipline. Towards this goal, the course will explore research topics centered on signal, image, or video processing. Throughout this course, visualization, biomedical image processing, vision, computer graphics, digital image processing and machine learning will be explored to tackle real-world problems in common areas of visual computing.

## CMPT 712

### Network Security

## Credit Hours: 3

This course seeks to cover a variety of topics in network security relevant to both practitioners and researchers. It may include topics such as cryptography, basic network attacks, port scanning, firewalls, TLS, IPsec, surveillance, privacy, intrusion detection, wireless network security, web applications, and network security tools. Both classic and recent research papers in the area may also be read and discussed with regards to their application to current problems

## CMPT 723

### Distributed Systems and Cloud Computing

#### Credit Hours: 3

Clients, servers, application servers, database servers, clusters of servers; distributed architectures such as single-tier, two-tier, multitier; implementation issues such as performance, security, transactions; enterprise application server capabilities coding, access, and software development tools.

## CMPT 741

### Advanced Computer Networks

#### Credit Hours: 3

Network technologies; packet/circuit switching, switching and routing; packet switch architectures, Interior and Exterior internet routing protocols and their performance; protocol processing. Network control: traffic management, congestion (flow and rate) control, admission control. Applications demanding high-speed communication are included.

## CMPT 742

### Information Security

#### Credit Hours: 3

Computer Security is a broad, cross cutting discipline that impacts multiple area of computing. This course seeks to provide advanced topics in security relevant to both practitioners and researchers. It may include topics such as cryptography, threats, vulnerabilities, intrusion detection, and security policies, legal and ethical factors in security, advanced

persistent threats, privacy concerns, network security, security tools, and security best practices. Both classic and recent research papers in the area may also be read and discussed with regards to their application to current problems.

## CMPT 743

### Wireless Communication

#### Credit Hours: 3

This course covers transmission fundamentals; communication networks, protocols, TCP/IP suite; antennasand propagation; signal encoding techniques; spectrum, coding and error control, satellite communications, cellular wireless networks, cordless systems and wireless local loop, mobile IP and wireless access protocol, wireless LAN technology, IEEE 802.11; wireless LAN standard; Bluetooth. Wideband CDMA, Wideband OFDM, and MIMO techniques.

## CMPT 771

### Algorithm Design and Modeling

#### Credit Hours: 3

Design and analysis of problems involving sorting, searching, scheduling, graph theory, design techniques such as approximation, branch- and-bound, divide-and-conquer, dynamic programming, greedy, and randomization applied to polynomial and NP-hard problems; analysis and space utilization; optimization problem modelling implementation of algorithms based on advanced data representation techniques, Utilization of solvers to find direct solutions starting from formal problem models.

## CMPT 773

### Machine Learning

#### Credit Hours: 3

The main aim of this course is to nurture a deep understanding of the fundamental principles of machine learning, a discipline that grew out of computer science research on automatically “learning from experience”. The module will cover broad topics such as supervised learning, unsupervised learning, reinforcement learning, and objective evaluation of a machine learning algorithm’s performance. We will cover fundamentals



such as instance learning, decision tree learning, Bayesian inference, support vector machines) and also learn about the recent research in the area of machine learning, in particular deep neural networks. Applications to real-world problems.

## CMPT 782

### Special Topics in Computer Science

#### Credit Hours: 3

The content of this course varies to cover emerging theoretical and practical issues in Computer science. The department must approve the contents of this course prior to the offering each semester.

## CMPT 783

### Special Topics in Computer Engineering

#### Credit Hours: 3

The content of this course varies to cover emerging theoretical and practical issues in computer Engineering. The department must approve the contents of this course prior to the offering each semester.

## CMPT 899

### PhD Thesis

#### Credit Hours: 0 TO 48

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.

## CVEN 610

### Advanced Topics in Civil Engineering

#### Credit Hours: 3

A selection of state-of-the-art topics in civil engineering.

## CVEN 611

### Finite Element Method

#### Credit Hours: 3

Finite Element Discretization and the Direct Stiffness Method, Basic concepts of structural modeling. Finite element discretization: interpretations. Review of the direct stiffness method (DSM) of structural analysis. Modeling, stiffness, loads, boundary conditions and constraints. substructuring. Formulation of Finite Elements: Mathematical interpretation of finite elements: variational formulation. Shape functions. Structural and continuum elements. Isoparametric elements. Numerical integration. Computer Implementation of the Finite Element Method Model definition: Element level calculations. Equation assembly. Equation solver. Strain/stress recovery and post-processing. Constitutive models for geotechnical materials; application of the finite element method to static analysis of earth structures.

## CVEN 621

### Advanced Topics in Design of Steel Structures

#### Credit Hours: 3

Advanced strength of materials; Torsion on steel members; Compression members: columns and plates; Topics on flexural design of steel members; Analysis and design of steel connections; Floor vibration serviceability of steel framed structures.

## CVEN 622

### Structural Dynamics and Earthquake Engineering

#### Credit Hours: 3

Free vibration of Single Degree of Freedom Systems (SDOF), Forced Vibration of Single Degree of Freedom Systems (SDOF); Generalized SDOF Systems; Free vibration of Multiple Degree of Freedom Systems (MDOF), Forced Vibration of Multiple Degree of Freedom Systems (MDOF); Introduction to arthquake

Engineering; Earthquakes: Cause and Effect; Earthquake Loading of SDOF Systems; Seismic Hazard Analysis; Earthquake Loading of MDOF Systems; Inelastic Behavior of Materials and Structures; Concepts in Seismic Resistant Design.

## CVEN 623

### Design of Highway Bridges

#### Credit Hours: 3

Historical background of bridges and types; Bridge design considerations; Review of applicable design codes; Loads on bridges and force distribution; Bridge geometry; Reinforced concrete and steel deck design; Reinforced concrete and steel girder design; Bridge abutment design, Analysis tools for highway bridges; Design of highway bridge foundations.

## CVEN 624

### Theory of Plates and Shells

#### Credit Hours: 3

Two-dimensional elasticity theory, Analysis and design of rectangular and circular plates, Analysis of plates including shear deformations, Numerical methods for shells, Analysis and design of thin shells; cylindrical vaults, domes, circular-cylindrical tanks, intersection shells and folded plates.

## CVEN 630

### Advanced Geo-mechanics

#### Credit Hours: 3

Advanced treatment of topics in soil mechanics, including consolidation and settlement analysis; shear strength of soils; soil improvement; soil reinforcement; and slope stability analysis.

## CVEN 640

### Hydrology

#### Credit Hours: 3

Analysis and synthesis of the hydrograph. Stream-flow routing. The hydrograph as a function drainage characteristics; estimation of runoff from meteorological data. Infiltration theory. Sea water intrusion in coastal aquifers. Application of hydrologic techniques including statistical methods.

## CVEN 641

### Analysis of Hydraulic Systems

#### Credit Hours: 3

This course deals with advanced methods of analyzing hydraulics and water resources. Exact and approximate methods are reviewed. The formulation and solution of problems by finite difference and finite element methods is a major part of the course. Typical examples from open channel and ground water flows are included. The method of characteristics is applied to transient flow in open channels and closed conduits.

## CVEN 650

### Ground Water Contamination

#### Credit Hours: 3

Introduction of Darcy's equation and governing equation; construction of flow-nets, flow quantifications, and ground water resource evaluation; contaminant hydrogeology, mas transport equations, reaction, and adsorption; introduction to biodegradation and natural attenuation; simulation of ground water flow and transport.

## CVEN 660

### Advanced Traffic Engineering

#### Credit Hours: 3

An advanced overview of traffic engineering concepts including data collection technologies, traffic engineering studies, traffic control devices, warrants, and guidelines and applications for traffic control measures. Selected topics include capacity analysis of uninterrupted flow facilities and principles of analysis and evaluation of signalized intersections.

## CVEN 661

### Geometric Design of Highways

#### Credit Hours: 3

Study of highway geometric design in the engineering of transportation system.

## CVEN 662

### Traffic Safety Analysis

#### Credit Hours: 3

Understanding crash research concepts, and identifying factors contributing to traffic crash

occurrence.

## CVEN 663

### Pavement Management Systems

#### Credit Hours: 3

Role of pavement in today's transport system, basic components of pavement management systems (PMS). Planning pavement investments and pavement research management. Evaluation of pavement structural capacity performance, distress and safety. Analysis and economic evaluation of alternative design strategies. Construction, rehabilitation and maintenance as related to other phases of PMS. Data management requirements.

## CVEN 690

### Master Project

#### Credit Hours: 3

The student will be required to complete a project ending with a report that shows an excellent degree of understanding of the subjects studied in graduate courses as well as high technical writing skills. The report will be evaluated by examiners specialized in the project subject.

## CVEN 695

### Master Thesis

#### Credit Hours: 0 OR 6

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion.

## CVEN 710

### Advanced Special Topics I

#### Credit Hours: 3

This course includes a selection of state-of-the-art topics in civil engineering.

## CVEN 711

### Advanced Special Topics II

#### Credit Hours: 3

This course includes a selection of state-of-the-art topics in civil engineering.

## CVEN 712

### Advances in Civil Engineering Practice and Research

#### Credit Hours: 3

This course will apply and refine advanced knowledge, concepts, methodologies and systematic thinking to prepare the student for highly advanced research work. It will develop cognitive skills in review, analysis and synthesis in civil infrastructure planning, design and research contexts, including critical, creative and innovative solutions to complex problems. It stresses the ability to communicate knowledge and concepts in written, modelled and graphical forms to civil engineering research audiences. It also stresses independent and collaborative strategies in team working contexts.

## CVEN 899

### PhD Thesis

#### Credit Hours: 0 TO 48

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.

## DAWA 111

### Islamic Culture

#### Credit Hours: 3

This course seeks to strengthen the unifying identity to which all students subscribe, regardless of their academic specialties. The Course adopts a particular educational philosophy that suits its particular nature. All topics are arranged in a unifying, integrative structure that begins with defining key concepts related to culture, science and civilization. Following these preliminary clarifications, an intensive analytical material on issues related to the message of Islam, creation of man, role of the Islamic ummah, and the relationship with the other, will be presented.

## DENG 602

### Applied Research Methodology

#### Credit Hours: 3

This course will develop the research abilities of PhD students in Engineering. The goal of the course is to equip students with both qualitative and quantitative tools to conduct research. This is a practical course, designed to help graduate students arrive at a workable thesis plan, and a comprehensive knowledge of the resources available to them to pursue it. It covers the thesis as a type of writing, project planning, time management, research ethics, information retrieval, and professional skills.

## DENG 603

### Advanced Numerical Methods

#### Credit Hours: 3

This course aims at understanding the construction and appropriate use of numerical algorithms that provide solutions to science and engineering problems. The following algorithms are studied; root finding, interpolation and approximation of functions, numerical differentiation and integration, numerical solutions of ordinary differential equations and boundary value problems. An emphasis will be given to understanding the accuracy, convergence, divergence, limit analysis, efficiency, and stability of various algorithms. The course will use some commercially available software such as MATLAB.

## DENG 604

### Applied Statistics Techniques

#### Credit Hours: 3

This applied course is designed for graduate students. The goals of the course are to develop the skills necessary to identify an appropriate technique, estimate models, and interpret results for independent research and to critically evaluate contemporary research using advanced quantitative methods. The focus of the course is on estimating models and interpreting the results, rather than understanding in detail the mathematics behind the techniques. The course will provide students with a solid foundation in advanced quantitative methods, which is in high demand in many fields. The course will include random distributions, error analysis, confidence levels, statistical analysis of reduced sample size and other important topics to help the students understand the importance of applying statistical techniques to their research findings.

## DENG 621

### Graduate Seminar

#### Credit Hours: 3

This course covers the art of writing research papers, technical reports, grant proposals and finding related materials; discussion of delivery and presentation styles. Graduate students are required to attend the seminars given by faculty, visiting scholars, and fellow graduate students. It is expected that students will actively participate by asking questions of the speaker. They will be required to make professional

presentations of their work to diverse audiences. Among other things, this course is designed to give the student an overview of research in their department and professional societies in their discipline as well as contemporary issues in engineering.

## **DENG 624**

### **Innovation & Tech. Mgmt**

#### **Credit Hours: 3**

Understanding of the dynamics of innovations and processes of technological development as well as insight into new approaches, methods and tools to handle complex systems and social aspects of innovations. Principles of new approaches in managing complex systems; Exploring Information Driven Management approach and Self-Organizing principles. Exploring the principles of Dependence Structure Matrix and Domain Mapping Matrix in managing complexity and uncertainty. Exploring the principles of self-organizing systems approach as an alternative approach beyond the present concurrent engineering approach.

## **DENG 625**

### **Sustainable Development**

#### **Credit Hours: 3**

Challenges of sustainable development in Qatar and in other countries, influence of sustainable development concepts on environmental decision-making, sustainable development as a paradigm for environmental policy-making. The course will cover Concept of Sustainable development, strategies to implement sustainable development, sustainable development policies, sustainability metrics, sustainability and innovation, and ecological design.

## **DENG 626**

### **Modelling and Simulation**

#### **Credit Hours: 3**

The course gives an introduction to modelling/simulation/analysis, with an emphasis on the first two parts. The contents of the course include direct simulations of discrete-time models (e.g. cellular automata), event based simulations (both in queuing system and as a

method to speed up discrete time models), methods to solve ordinary differential equations and a short introduction to Markov chain Monte Carlo. There is a strong emphasis on applications and implementations, both with Matlab and with programs that link to numerical libraries.

## **DENG 699**

### **PhD Thesis**

#### **Credit Hours: 0 OR 9**

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.

## **DENG 702**

### **Applied Research Methodology**

#### **Credit Hours: 3**

This course will develop the research abilities of PhD students in Engineering. The goal of the course is to equip students with both qualitative and quantitative tools to conduct research. This is a practical course, designed to help graduate students arrive at a workable thesis plan, and a comprehensive knowledge of the resources available to them to pursue it. It covers the thesis as a type of writing, project planning, time management, research ethics, information retrieval, and professional skills.

## **DENG 704**

### **Applied Statistic Techniques**

#### **Credit Hours: 3**

This applied course is designed for graduate students. The goals of the course are to develop the skills necessary to identify an appropriate technique, estimate models, and interpret results for independent research and to critically

evaluate contemporary research using advanced quantitative methods. The focus of the course is on estimating models and interpreting the results, rather than understanding in detail the mathematics behind the techniques. The course will provide students with a solid foundation in advanced quantitative methods, which is in high demand in many fields. The course will include random distributions, error analysis, confidence levels, statistical analysis of reduced sample size and other important topics to help the students understand the importance of applying statistical techniques to their research findings

## **DENG 724**

### **Innovation and Technology Management**

#### **Credit Hours: 3**

This course covers the process and dynamics of innovation and characteristics of different types of innovations, relations between innovations, technology and product development, dynamics of technological evolution and technological shifts, social and human side of innovations, technology development incremental and radical, and product development, impact of creativity in fostering innovations and motivating professional people in technologically oriented corporations, organizational and managerial aspects of organizing product development in concurrent engineering way in cross-functional teams and exploring barriers to integration, principles of new approaches in managing complex systems, exploring Information Driven Management (IDM) approach and Self-Organizing principles, exploring the principles of Dependence Structure Matrix (DSM) and Domain Mapping Matrix (DMM) in managing complexity and uncertainty.

## **DENG 725**

### **Sustainable Development**

#### **Credit Hours: 3**

Challenges of sustainable development in Qatar and in other countries, influence of sustainable development concepts on environmental decision-making, sustainable development as a paradigm for environmental policy-making. The course will cover concept of sustainable development, strategies to implement sustainable development, sustainable development policies, sustainability metrics, sustainability and innovation, and ecological design.

## **DENG 726**

### **Modeling and Simulation**

#### **Credit Hours: 3**

The course gives an introduction to modelling/simulation/analysis, with an emphasis on the first two parts. The contents of the course include direct simulations of discrete-time models (e.g. cellular automata), event based simulations (both in queuing system and as a method to speed up discrete time models), methods to solve ordinary differential equations and a short introduction to Markov chain Monte Carlo. There is a strong emphasis on applications and implementations, both with Matlab and with programs that link to numerical libraries.

## **ECON 111**

### **Principles of Microeconomics**

#### **Credit Hours: 3**

This course focuses on basic microeconomic concepts such as supply and demand, market equilibrium, the concept of elasticity, consumer choice, utility, production and costs, the theory of perfect competition, monopoly and monopolistic competition

## **ECON 112**

### **Principles of Macroeconomics**

#### **Credit Hours: 3**

This course focuses on basic macroeconomic concepts such as the production possibility set, the circular flow of income, the national accounts, the components of aggregate spending, a simple model of income determination and international linkages.

## **ECON 501**

### **Introduction to Economics**

#### **Credit Hours: 3**

The course provides the students with the essential tools of economic analysis, to allow them to utilize these tools in their



work, and to make sense of the economic events occurring around them. This might include the following issues: Economic problems, supply and demand, consumer theory, producer theory, circular flow of income, measurement of GDP, fiscal and monetary policies, business cycle, inflation and unemployment.

## **ECON 602**

### **Managerial Economics**

#### **Credit Hours: 3**

An overview of the fundamental concepts in microeconomics as they apply to managers in a global environment, this course covers the use of quantitative and computer applications to determine optimal levels of output, resource usage and capacity planning, application of appropriate decision-making models, and mathematical tools for optimal business decisions.

## **ECON 800**

### **Advanced Microeconomics**

#### **Credit Hours: 3**

This course provides an advanced level discussion of key-concepts of microeconomic theory and develops an appreciation of the usefulness of microeconomic analysis. Topics include consumer and producer theory, partial and general equilibrium, competition and market power, welfare analysis, input markets, game theory, market failure, and asymmetric information.

## **ECON 801**

### **Applied Econometrics**

#### **Credit Hours: 3**

This course provides a solid grounding in advanced developments in applied econometrics. A major feature of the course is the use of both analytical and computer-based approaches. Topics include linear and multiple regression models, model misspecifications, time series models, nonlinear models, choice models and panel data.

## **EDCI 601**

### **Advance Study of Curriculum Theory**

#### **Credit Hours: 3**

This course provides advanced study of curriculum theory by examining the foundations of education and nature of curriculum theory, differentiates curriculum theory from curriculum planning, places the study of curriculum theory within the larger society, and explores alternative models of curriculum theory. Students view and analyze the curriculum and instruction programs and develop skills for implementing change. Issues and questions that curriculum theory

addresses and attempts to answer are raised and consider the role that curriculum theory plays in the professional work of educators.

## **EDCI 602**

### **Assessment Principles and Methods**

#### **Credit Hours: 3**

This course examines the theory and practice of assessment as a component of curriculum and instruction in classroom settings. Topics covered include the role of assessment and measurement in teaching and learning; concepts of validity, reliability and usability; assessment purposes and strategies; test theory; and analysis, interpretation, and use of assessment results. Students prepare and apply methods of assessment appropriate to their own practice and

critically investigate current issues in assessment.

## **EDCI 603**

### **Theory and Practice in Classroom Instruction**

#### **Credit Hours: 3**

This course focuses on instructional design and underlying theories necessary for effective facilitation of learning. Different perspectives of instruction will be explored. Investigation of current theories will lead to an understanding of effective instructional practices in a variety of settings.

## **EDCI 604**

## **Integrating Technology in Education**

#### **Credit Hours: 3**

This course is designed to enable educators to use technology to enhance instruction within and across content areas. Theoretical and practical aspects of technology integration within common teaching/learning practices will be discussed.

## **EDCI 605**

### **Critical Issues and Theories in Curriculum Design and Evaluation**

#### **Credit Hours: 3**

The course guides student in the process of identifying and analyzing emerging and developing issues in curriculum design, development, implementation, and evaluation. Included are the identification of curriculum sources, how these sources influence trends, how these trends emerge and evolve, their impact on student achievement, and how professionals, particularly supervisors, curriculum developers, teacher-leaders, and teachers, can use these trends and issues to improve student learning.

## **EDCI 607**

### **Design and Evaluation of Assessment Systems**

#### **Credit Hours: 3**

This course provides the knowledge to design and implement an assessment system aligned with the goals of a curriculum or program of instruction. Students develop the expertise to the design summative and formative assessment and explore ways of linking assessment to learning (assessment as learning). Participants learn methods for combining results from different assessment components, moderation of assessment results, development and analysis of testing, setting grade boundaries, and reporting assessments and the evaluation of assessment and quality assurance in assessment.

## **EDCI 608**

### **Evaluation of School Programs**

#### **Credit Hours: 3**

This course provides the knowledge, skills and strategies required for assessing and evaluating instructional and other educational programs in traditional and non-traditional institutions. The focus of the course includes determining present status, determining future direction, charting a course of action, and assessing progress toward desired outcomes. Standardized and alternative forms of measurement are studied as a means of evaluating and validating instructional outcomes.

## **EDCI 609**

### **Research Methods and Data Analysis**

#### **Credit Hours: 3**

The design, conduct, analysis, and written reporting of educational research is developed by practicing each of these research phases. Extensive study in learning to conduct and analysis of data is provided. Includes practical applications to educational problems in preparation for thesis development and course assessment tasks will be directly linked to thesis development.

## **EDCI 690**

### **Thesis**

#### **Credit Hours: 3**

Students enrolled in the research track are required to submit a thesis that demonstrates they have acquired the technical and professional competencies associated with their chosen educational specialization and their ability to conduct research. The thesis identifies an issue of concern, reports on the existing body of knowledge, and presents significant research that would advance present information. The thesis describes a research project in which students apply best theory and practice. The problem may be drawn from students' workplaces or from some other setting. In keeping with the mission and conceptual framework of the College of Education, students are strongly encouraged to develop a thesis on topics dealing with topical educational issues and lifelong learning settings.

## **EDCI 695**

### **Intership/ Final Project**

#### **Credit Hours: 3**

This internship experience provides comprehensive field-based training designed to develop competencies needed by school educators with an emphasis on curriculum, instruction and/or assessment. Students enrolled in the professional are required complete and intership and to submit a final project that demonstrates they have acquired the technical and professional competencies associated with their chosen educational specialization.

## **EDEC 501**

### **Child Development and Learning**

#### **Credit Hours: 3**

The course focuses on an understanding of children’s physical, cognitive, linguistic, emotional and social growth and development. Review of child development history, theory, and research strategies in early childhood education. Discuss the effect of family, peers, media, and schooling on processes of learning. The course discusses psychological principles and theories that offer a scientific explanation to the process of the teaching and learning in early childhood settings. Topics of how children learn presented.

## **EDEC 504**

### **Management of Educational Environment in Early Childhood**

#### **Credit Hours: 3**

Refers to the wide variety of skills and techniques that teachers use to keep students organized, orderly, focused, attentive, on task, and academically productive during a class. Teachers will learn to execute classroom-management strategies effectively, teachers will minimize the behaviors that impede learning for both individual students and groups of students, while maximizing the behaviors that facilitate or enhance learning. Teachers will learn to display strong classroom-management skills, by organizing classroom space, choosing developmentally appropriate materials and engaging children with hands on activities. The reflective teaching model will be integrated through the internship learning activities. The course includes a field component

## **EDEC 510**

### **Preschoolers and Learning**

#### **Credit Hours: 3**

This course introduces students to the historical, philosophical, and sociological foundations of programs for young children. The course further focuses on an understanding of children’s physical, cognitive, linguistic, emotional and social growth and development. Child development history, theory, and research strategies are discussed, as well as the effect of family, peers, media, and schooling on processes of learning.

## **EDEC 511**

### **Method of Teach.in Early Child**

#### **Credit Hours: 3**

This course focuses on instructional strategies appropriate to educating young children. Curriculum development principles and practices are reviewed, with a particular emphasis on the need for flexibility and the construction of appropriate learning environments. Students are also taught how to select and evaluate prepared materials and how to create new materials for young children that are consistent with program goals and objectives; how to create learning environments that foster creativity and intellectual inquiry; how to support play in the early childhood classrooms across domains, how to incorporate families and communities into the teaching process and the importance of supporting young children’s literacy.

#### **Prerequisite**

### **EDUC 500 AND EDUC 502 AND EDUC 503**

## **EDEC 512**

### **Language & Literacy Development**

#### **Credit Hours: 3**

This course provides students with an overview of current knowledge on children’s literacy and language development, with an emphasis on planning an appropriate curriculum to promote literacy in early childhood classrooms. Other areas of emphasis include language acquisition theories, core components of comprehensive early literacy programs such as print awareness and supporting children’s writing, the importance of children’s literature and second language learning issues.

## **EDEC 513**

### **Early Childhood Curricula and Instructional Planning**

#### **Credit Hours: 3**

This course designed to give students an overview of curriculum design in the early childhood classroom. Focuses on the Development of curriculum and instructional practices in kindergarten and early childhood settings and principles and methods of teaching young children. Provide students with the opportunity to explore various curriculum models and underlying theories utilized in designing early childhood curriculum. Develop skills related to designing appropriate curricula for young children and examine factors, which have influenced curriculum development in Early Childhood Education. As a part of putting theory into practice, students will determine how certain factors have influenced the development of a variety of curriculum models that have shaped the present curriculum in early childhood education. This course has a field component in the primary school and early childhood settings.

## **EDEC 522**

### **Child Guidance**

#### **Credit Hours: 3**

This course focuses on guidance strategies and skills for promoting positive social behaviors, the well-being and healthy development of individuals and groups of children. It presents positive guidance principles and techniques, family involvement and cultural influences. The course will help students to strengthen their abilities to deal with culturally diverse student’s society in early childhood settings

#### **Prerequisite**

### **EDUC 500 AND EDUC 502 AND EDUC 503**

## **EDEC 580**

### **Internship**

#### **Credit Hours: 6**

This field based course provides an opportunity for students to assume the role of a preschool teacher, while being jointly supervised by a mentor teacher and a university faculty member. Students spend four weeks working with their university instructors, preparing for their internships, and 10 weeks in the field, in a preschool classroom, under the joint supervision of the university instructor and a mentor teacher. Students are also required to participate in a seminar with their university instructor; topics for the seminar include student concerns as well as instructor and mentor teacher suggestions for teaching improvements. This course requires a minimum of 400 hours in the field.

## **EDEC 583**

### **Internship**

#### **Credit Hours: 9**

This field-based course provides an opportunity for students to assume the role of a preschool teacher, while being jointly supervised by a mentor teacher and a university faculty member. Students spend four weeks working with their university instructors, preparing for their internships, and 10 weeks in the field, in a preschool classroom, under the joint supervision of the university instructor and a mentor teacher. Students are also required to participate in a seminar with their university instructor; topics for the seminar include student concerns as well as instructor and mentor teacher suggestions for teaching improvements. This course requires a significant number of hours in the field.

## **EDEL 601**

### **Foundations in Educational Leadership**

#### **Credit Hours: 3**

This course is designed as a survey course in educational leadership. Topics of study include creating and sustaining a school vision; promoting a positive school culture, providing an effective instructional program for all students; supporting staff development; managing the organization, and providing ethical leadership.

## **EDEL 602**

### **Management of Information Systems**

#### **Credit Hours: 3**

This course is designed to provide candidates with the knowledge and ability to use school information systems, which include collecting, analyzing, and interpreting data, to assess and monitor the development, implementation, and stewardship of a vision; to assess and monitor the school culture, the curriculum and instruction, and the instructional practices; to assess and monitor the safety, effectiveness, efficiency, and equity of the organization, operations, and resources; and to assess and monitor issues and trends related to community conditions and dynamics.

## **EDEL 603**

### **Educational Policy in Qatar**

#### **Credit Hours: 3**

This course is designed to provide candidates with knowledge related to the historical development of the education system in Qatar and the development of its educational policies. In addition, the candidates will acquire the knowledge and ability to promote the success of all students by collaborating with families and other community members, responding to diverse community interests and needs, and mobilizing community resources. Moreover, this course will provide candidates with the knowledge and ability to promote the success of all students by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context.

## **EDEL 604**

### **Curriculum Design & Development**

#### **Credit Hours: 3**

This course provides candidates with the knowledge and abilities needed to promote the success of all students by providing an effective instructional program, applying best practice to student learning, collaborating with families and other community members, and responding to diverse community interests and needs. It engages candidates in examining and applying State of Qatar requirements for a well balanced curriculum.

## **EDEL 605**

### **Instructional Supervision**

#### **Credit Hours: 3**

This course includes the examination of theories and practices in curriculum development, evaluation, and alignment and the application of these concepts to create an effective instructional program to support effective learning for all students. It engages candidates in examining and applying the requirements of the State of Qatar for a well balanced curriculum.

## **EDEL 607**

### **School Finance and Resource Management**

#### **Credit Hours: 3**

This course provides candidates with basic concepts in school finance. Additionally, it prepares candidates to recognize investment in education as an important human resource; to identify, analyze, and manage major sources of fiscal and non-fiscal resources for schools. This course helps in developing human resources and practices in school systems and in identifying responsibilities for attracting, selecting, developing, evaluating and retaining competent faculty and staff.

## **EDEL 608**

### **Seminar in Issues in Educational Leadership**

#### **Credit Hours: 3**

This course examines current emerging issues and trends in educational leadership by providing frameworks and models. Participants will research factors that influence educational leadership such as globalization, data-based decision making, diverse learners, educational reform and school restructuring, educational technology and recent research on student achievement and build the necessary leadership competence to respond to these issues and trends.

## **EDEL 609**

### **Action Research**

## **Credit Hours: 3**

The focus of this course is to apply action research in authentic contexts to improve teaching and learning. Candidates are expected to use action research as a vehicle for addressing individual or organizational problems. This cyclic method consists of describing a problem, gathering data to understand the problem, planning action to solve the problem, implementing the actions, monitoring and reviewing the effects of these actions, and then determining next steps based on the evidences. Students will also investigate the role of the administrator as an educational leader who supports the teaching and learning processes at the school. During this course, the learner will formulate a professional development plan for a teacher and implement the plan, with the approval of the school academic coordinator and faculty teaching staff. This course has an extensive field-based component.

## **EDEL 610**

### **Internship**

#### **Credit Hours: 6**

In this course, the learner will integrate, synthesize, and apply knowledge acquired during all program courses in relation to educational leadership. The course allows the learner to practice and develop skills required of an educational leader (school principal or vice principal) during a period of ten weeks. The internship is supervised by a college staff member and a school educational leader (principal or vice principal). Leadership responsibilities in regard to students, employees, parents, and the community increase gradually in number and complexity over the course of the internship. This course requires a significant number of field hours.

## **EDPR 507**

### **Methods I: Instructional Methods in Primary Education**

#### **Credit Hours: 3**

This course engages participants in learning about and practicing research-based instructional methods for teaching in the primary grades. Topics will include active, student-centered instructions, large group and small group instruction, differentiate instruction, and discipline-specific strategies. This course has a field component.

## **EDPR 508**

## **Methods II: Inquiry and ICT in Primary Education**

#### **Credit Hours: 3**

This course prepares future primary teachers to engage students in using inquiry, problem solving, and creative thinking to solve problems and generate new knowledge. In addition, it models and facilitates the use of discipline specific technologies for teaching and for use by students to enhance learning. This course has a field component

## **EDPR 540**

### **Reading and Language Art Method**

#### **Credit Hours: 3**

This course deals with the methods and strategies essential for the effective teaching of literacy skills (word knowledge, reading and writing) in English as a second language to primary schoolchildren. Course topics include: components of reading identified by the “National Reading Panel” report (NICHD, 2000): phonemic awareness, phonics (decoding), fluency, vocabulary, and comprehension, besides teaching spelling, and writing.

## **EDPR 541**

### **Mathematics Methods**

#### **Credit Hours: 3**

This course assists a student teacher (Prospective teacher) in knowing the Primary mathematics structure, nature, different components, methods, and techniques of the teaching process. Moreover, it helps a student teacher to acquire fundamental and appropriate teaching skills by using microteaching technique for peers. As it is known in practical education this leads to acquiring different aspects of experience.

## **Prerequisite**

### **EDUC 500 AND EDUC 501 AND EDUC 502 AND EDUC 503**

## **EDPR 542**

### **Science Methods**



**Credit Hours: 3**

This course analyses curricula, laboratory equipment, and various resources for teaching science, examines methods relevant for active, authentic learning and appropriate teaching of science to young learners and helps children acquire knowledge, attitudes and skills essential to science literacy. The focus is on science for understanding and inquiry skills. Qatar standards for science in elementary schools is presented and analysed.

**Prerequisite**

EDUC 500 AND EDUC 501 AND EDUC 502 AND EDUC 503

**EDPR 543****Arabic Methods I****Credit Hours: 3**

This course covers the nature of the structure of Arabic language and its characteristics and objectives, and the characteristics of the language development for primary school children and how to satisfy it and develop it through the Arabic language curriculum. It also equips students with basic general teaching skills that prepare them to teach various Arabic language arts successfully as it is needed for the next methods course (methods of teaching Arabic language 2), with a focus on the national curriculum standards for the Arabic language and what these developed standards require in terms of changes in course content and the method of implementing it.

**EDPR 544****Arabic Methods II****Credit Hours: 3**

This course covers the different teaching methods and effective strategies used in teaching various Arabic language arts in primary grades. It gives the candidates the opportunity to practice these skills and strategies using the peer method of teaching, Micro teaching, improved modern methods, and the use of modern technologies in line with national standards for primary school. It also paves the way for the acquisition of educational field experiences in its various aspects in internship schools.

**Prerequisite**

EDPR 543

**EDPR 545****Social Studies Methods****Credit Hours: 3**

This course is designed to provide methods and content of teaching social studies to primary school students. It includes theoretical topics, lesson planning, visual teaching, evaluation, and a general overview of the content and standards included in the social studies curriculum and many other topics. It also includes a preliminary focus on the development of your educational philosophy in the teaching of social studies in the primary school, as well as the use and application of innovative teaching methods to be an excellent social studies teacher and effective for the primary grades.

**EDPR 546****Islamic Studies Methods****Credit Hours: 3**

This course covers the concept of Islamic education and its characteristics, objectives of teaching it, and the teaching skills that the teacher should know, as well as the modern teaching methods and strategies which focus on the positive involvement of the learner such as active learning, cooperative learning, and brainstorming and more. The learner also studies the teaching of the different branches of Islamic education which include recitation, interpretation, the authentic sayings of prophet Mohammad and his tradition, Islamic beliefs, worship, discipline in line of the objectives of teaching, the principles to consider in teaching, and steps of teaching. It also covers how to use technology in the teaching of Islamic education. Likewise, it covers the role of the Islamic calendar in the Islamic Education, and the attributes and characteristics of the teacher of Islamic education. Finally, it covers how to conduct research in Islamic education.

**EDPR 580****Internship****Credit Hours: 6**

Describe, week-by-week, a frame work for your progress from supportive activities in the classroom towards full responsibility for all teaching, and then scaling back your involvement with the class until the mentor teacher is again the main instructor.

**EDPR 583****Internship****Credit Hours: 9**

Describe, week-by-week, a frame work for your progress from supportive activities in the classroom toward full responsibility for all teaching, and then scaling back your involvement with the class until the mentor teacher is again the main instructor. This course requires a significant number of field hours.

**EDSE 502****Scnd Lang Lrnrs Scnd Classroom****Credit Hours: 3**

This course is designed for preservice teachers to enable them to teach in multi-lingual settings by selecting and modifying curriculum and instruction for English language learners (ELLs). During this course, current and past methodologies for teaching limited English-proficient students at the secondary level are thoroughly introduced and analyzed. Students determine which strategies are best for their particular teaching situations. As the course progresses, participants reference the varying methodologies and make their own instructional plans and units. Emphasis is placed on incorporating a variety of teaching strategies and standards while stressing both content skills and language skills.

**EDSE 503****Read and Writ Across Curr****Credit Hours: 3**

The purpose of this course is to extend the candidate's thinking about the concept of literacy, and to prepare the candidate to critically analyze learning and literacy instruction in today's schools. The focus is on providing a critical perspective for teaching reading and writing across the curriculum. The emphasis of the class is on developing conceptual tools that enable the candidate to use reading and writing as instructional tools in the classroom. The course focuses on the

nature of the literacy processes and instructions that facilitate learning, particularly as it applies to secondary students. The course uses a social-constructivist theoretical perspective and involves a field-based experience.

**EDSE 504****Teaching Methods 1 for Sciences****Credit Hours: 3**

This course engages participants in learning about and practicing research-based content-specific instruction in science and mathematics education at the secondary level. Topics will include use of the 5-E model; creating and using concrete, abstract, and mathematical models; designing, conducting, and assessing developmentally-appropriate experiments; historical bases of science and mathematics; and ethics and safety in the secondary classroom. This course has a field component in the secondary classroom.

**EDSE 505****Teaching Method II: ICT for Sciences****Credit Hours: 3**

This course prepares future teachers to engage and facilitate research by secondary students in science and mathematics. In addition, it models and facilitates the use of discipline specific technologies for teaching and for use by students to enhance learning.

**EDSE 506****Teaching Methods 1 for Humanities****Credit Hours: 3**

This course will examine theory and practice in the teaching of languages, social sciences, and Islamic studies. The course will acquaint students with the objectives, content, and methods associated with teaching in these disciplines, aligned with best practices for adolescent learners. Task-based assessments in authentic educational contexts will be a key part of the course. The course has a field-based component.

## EDSE 507

### Teaching Method II for Humanities

#### Credit Hours: 3

This course prepares future teachers to engage and facilitate research by secondary students in the subject areas of English language, Arabic language, social studies, and Islamic studies. In addition, it models and facilitates the use of discipline specific technologies for teaching and for use by students to enhance learning.

## EDSE 553

### Mthds I:Instr Strt Islmc Studs

#### Credit Hours: 3

This course covers the concept of Islamic education and its characteristics, objectives of teaching it, content analysis of its different topics, and the teaching skills that the teacher should know, as well as the modern teaching methods and strategies which focus on the positive involvement of the learner such as active learning, cooperative learning, and brainstorming and more. The learner also studies the teaching of recitation and the interpretation in line of the objectives of teaching it, the principles to consider in teaching it, the steps to teach each of them, as well as studying some of the rules of recitation and tajwid.

## EDSE 554

### Methods I:Instr Strat-Bio

#### Credit Hours: 3

This course covers goals, methods, and materials appropriate for teaching secondary levels courses in biology, with special emphasis on the Science Curriculum Standards for the State of Qatar. Topics include constructivist learning theories, discovery learning, inquiry, learning cycle models, project and problem-based learning, and the design and management of science laboratories. The differences between the Advanced and Foundation Curriculums for the State of Qatar National Curriculum Standards and the changes in strategies that are required are explored. This course has a field-based component.

## EDSE 555

### Methods I:Instr Strat-Chem

#### Credit Hours: 3

This course covers goals, methods, and materials appropriate for teaching secondary levels courses in chemistry, with special emphasis on the Science Curriculum Standards for the State of Qatar. Topics include constructivist learning theories, discovery learning, inquiry, learning cycle models, project and problem-based learning, and the design and management of science laboratories. The differences between the Advanced and Foundation Curriculums for the State of Qatar National Curriculum Standards and the changes in strategies that are required are explored. This course has a field-based component.

## EDSE 556

### Methods I: Instuctional Strategies-Physics

#### Credit Hours: 3

This course covers goals, methods, and materials appropriate for teaching secondary levels courses in science, with special emphasis on the Science Curriculum Standards for the State of Qatar. Topics include the use of ICT in chemistry; use of action research to inform instruction; and strategies to encourage, design, mentor and assess student research.

## Prerequisite

### EDSE 555

## EDSE 557

### Methods I:Instr Strat-Soc Stdy

#### Credit Hours: 3

This course covers goals, methods, and materials appropriate for teaching secondary level courses in social studies. Students learn research-based methods of effective instruction in the knowledge and skills related to the discipline. This course has a significant field-based component.

## EDSE 558

### Mthds I:Instr Strat Arab

#### Credit Hours: 3

This course covers goals, methods, and materials appropriate for teaching secondary levels courses in the Arabic language, with special emphasis on the Arabic Curriculum Standards for the State of Qatar. The differences between the Advanced and Foundation Curriculums for the State of Qatar National Curriculum Standards and the changes in strategies that are required are explored. This course has a field-based component.

## EDSE 559

### Methods I:Instructional Strategies English

#### Credit Hours: 3

This course covers goals, methods, and materials appropriate for teaching secondary levels courses in English (ESL, EFL), with special emphasis on the English Curriculum Standards for the State of Qatar. The differences between the Advanced and Foundation Curriculums for the State of Qatar National Curriculum Standards and the changes in strategies that are required are explored. This course includes an extensive content- specific ICT component and includes field-based experience in a preparatory or secondary school setting.

## EDSE 560

### Methods I:Instructional Strategies Mathematics

#### Credit Hours: 3

A study of teaching strategies designed to put into practice the major ideas of mathematics learning and teaching, including the theories of Piaget, Vygotsky and others, as applied to such topics as scaffolding, formal thinking, and problem solving. Strategies are studied for teaching learners of different ages, developmental stages, cognitive styles, and other individual differences. The differences between the Advanced and Foundation Curriculums for the State of Qatar National Curriculum Standards and the changes in strategies that are required are explored. This course has a field-based component.

## EDSE 563

### Methods II:Inquiry and ICT Islmc Studies

#### Credit Hours: 3

This course covers the teaching of the different branches of Islamic education which include the authentic sayings of prophet Mohammad and his tradition, Islamic beliefs, worship, and discipline in line of the objectives of teaching, and the principles to consider in teaching, and steps of teaching. It also covers how to use technology in the teaching of Islamic education, the role of the Islamic calendar in the Islamic Education, the attributes and characteristics of the teacher of Islamic education and finally, how to conduct research in Islamic education.

## Prerequisite

### EDSE 553

## EDSE 564

### Methods II: Inquiry & ICT in Biology

#### Credit Hours: 3

This course covers goals, methods, and materials appropriate for teaching secondary levels courses in science, with special emphasis on the Science Curriculum Standards for the State of Qatar. Topics include the use of ICT in biology; use of action research to inform instruction; and strategies to encourage, design, mentor and assess student research.

## Prerequisite

### EDSE 555

## EDSE 565

### Mthds II Inquiry & ICT in Chemistry

#### Credit Hours: 3

This course covers goals, methods, and materials appropriate for teaching secondary levels courses in science, with special emphasis on the Science Curriculum Standards for the State of

Qatar. Topics include the use of ICT in chemistry; use of action research to inform instruction; and strategies to encourage, design, mentor and assess student research.

### Prerequisite

#### EDSE 555

#### EDSE 566

### Mthds II: Inquiry & ICT in Physics

#### Credit Hours: 3

This course covers goals, methods, and materials appropriate for teaching secondary levels courses in science, with special emphasis on the Science Curriculum Standards for the State of Qatar. Topics include the use of ICT in physics; use of action research to inform instruction; and strategies to encourage, design, mentor and assess student research. This course has a field-based component.

### Prerequisite

#### EDSE 556

#### EDSE 567

### Methods II: Inquiry & ICT for Social Studies

#### Credit Hours: 3

Candidates will study goals, methods, and materials appropriate for teaching secondary levels courses in social studies, with a special emphasis on the use of ICT in social studies instruction. The course will also include the use of action research to inform instruction; and strategies to encourage, design, mentor and assess student research.

### Prerequisite

#### EDSE 557

#### EDSE 568

### Methods II: Inquiry & ICT for Arabic Studies

#### Credit Hours: 3

This course introduces student-teachers to some Arabic language teaching methods with special focus on incorporating technology in teaching Arabic. It also introduces students to evaluation methods and trains them in constructing various types of examinations. As well, the course focuses on teaching students the research methods, techniques, and strategies.

### Prerequisite

#### EDSE 558

#### EDSE 569

### Methods II: Inquiry & ICT in English

#### Credit Hours: 3

This course covers goals, methods, and materials appropriate for teaching secondary levels courses in English. The differences between the Advanced and Foundation Curriculums for the State of Qatar National Curriculum Standards and the changes in strategies that are required are explored. Candidates learn how to conduct action research, initiate and guide student research, and to use ICT in English teaching. This course has a field-based component.

### Prerequisite

#### EDSE 559

#### EDSE 570

### Methods II: Inquiry & ICT in Mathematics

#### Credit Hours: 3

The course introduces student-centered methods in teaching mathematics. Special attention is devoted to technological aids to instruction and hands-on mathematics equipment such as computer-aided instruction and mathematics explorations to

stimulate discovery learning. The course also includes the use of action research to assess and inform instruction and strategies to teach, encourage, mentor, and assess student research. This course has a field-based component.

### Prerequisite

#### EDSE 560

#### EDSE 580

### Internship

#### Credit Hours: 6

This course provides ongoing mentoring and reflection during a 10-week internship experience and the four weeks preparation for that internship. Topics for study emerge from the interns' authentic concerns and interests, from the university supervisor's classroom observations, and from mentor teacher suggestions. Candidates enrolled in this course assume the responsibilities of a classroom teacher in a preparatory or secondary school setting. This course requires a minimum of 400 field hours.

#### EDSE 581

### Internship

#### Credit Hours: 9

This course provides ongoing mentoring and reflection during a 10-week internship experience and the four weeks preparation for that internship. Topics for study emerge from the interns' authentic concerns and interests, from the university supervisors' classroom observations, and from mentor teacher suggestions. Candidates enrolled in this course assume the responsibilities of a classroom teacher in a preparatory or secondary school setting. This course requires a significant number of field hours.

#### EDSE 582

### Internship

#### Credit Hours: 9

This course provides ongoing mentoring and reflection during a 10-week internship experience and the four weeks preparation for that internship. Topics for study emerge from the interns' authentic concerns and interests, from the university supervisors' classroom observations, and from mentor teacher suggestions. Candidates enrolled in this course assume the responsibilities of a classroom teacher in a preparatory or secondary school setting. This course requires a significant number of field hours.

#### EDUC 500

### Qatari Schools and Society

#### Credit Hours: 1

This course has been designed to acquaint the learners with the progress of education in Qatar, including schools and the various elements that impact education and learning, such as the family and society. Learners become acquainted with the roles that they may be expected to play within the initiative of educational progress in Qatar through examining some of the issues related to the initiative and the responsibilities of teachers.

#### EDUC 501

### Human Development & Learning

#### Credit Hours: 2

Human Development and Learning is an applied field of psychology that relies on a number of psychological principles and theories in order to offer a scientific explanation to the process of the teaching and learning. Among the topics that this course covers are cognitive development, language development, personal development theories, intelligence, individual differences, learning theories, motivation, classroom management, and measurement and evaluation in the school. The focus of this course is on how learning occurs and strategies that support learning (pedagogy). This course has a field-based component.

#### EDUC 502

### Instructional Planning& Assessment

#### Credit Hours: 3



This course engages class participants in examining curriculum theory and models and provides experience in designing individual lessons, units, and assessments that promote the learning of all preparatory or secondary students. Participants in the class learn to plan an effective instructional program through applying best practices, responding to diverse community interests, and planning for student mastery of State of Qatar National Curriculum Standards and explore the differences and policies related to the Advanced-Foundation division of these standards. This course has a field-based component.

### **EDUC 503**

#### **Introduction to Special Edu**

#### **Credit Hours: 3**

This course provides broad knowledge and skills in special education for candidates in all teacher education programs. It mainly covers: models, theories, etiology, philosophies, legal provisions, ethical and professional commitment, assessment and identification procedures and instructional strategies for students with exceptional learning needs. It also provides knowledge of different characteristics of learners with special needs and their educational implications. This course stresses on adapting teaching strategies and differentiating instructions to meet the needs of individuals with exceptional learning needs. This course has a field-based component.

### **EDUC 504**

#### **Magt of the Educational Envir**

#### **Credit Hours: 3**

This course focuses on principles and strategies for developing and maintaining an effective classroom environment. A variety of models conducive to maintaining a positive environment are explored. Students are introduced to classroom management practices, instructional strategies, and collaborative consultation that facilitate a positive and effective educational climate. The reflective teaching model is integrated through the internship learning activities.

### **EDUC 505**

#### **Curriculum Development and Instructional Planning**

#### **Credit Hours: 3**

This course consists of two parts: The first one discusses the process of curriculum development, its aims, importance, stages, domains, standards, contemporary trends in curriculum development and the challenges face this process. The second part deals with the concept of instructional planning and the ways of implementing effective instruction. Students will learn to plan an effective instructional program through applying best practices, responding to diverse community interests, and planning for student mastery of State of Qatar National Curriculum Standards and will explore the differences and policies related to the Advanced-Foundation division of these standards. This course includes field experience in a preparatory or secondary school environment.

### **EDUC 520**

#### **Methods of Teaching ESL**

#### **Credit Hours: 3**

This course deals with the techniques, methods and strategies for the instruction of English as a second language. The following main topics are discussed: theories of first and second language acquisition, variables affecting second language acquisition, language transfer and inter language, techniques and methods of English instruction for Limited English Proficient students, teaching ESL in content areas and instructional modification, use of instructional strategies and appropriate assessment practices for ESL students, the ESL/Bilingual teacher and learner; strategies for developing listening, speaking, reading and writing skills of ESL/Bilingual learners (more emphasis will be given to oral skills), sociocultural issues related to education of ESL/Bilingual students, English as a world language and its teaching implications and issues related to nonnative English speaking teachers. This course includes a field-based component.

### **EDUC 606**

#### **Educational Research Meth**

#### **Credit Hours: 3**

This course provides an overview of research methods, designs, and techniques. Course content includes applying public information and research-based knowledge of issues and trends and the use of appropriate assessment strategies and research methodologies to address authentic issues in education. Students also explore the use of action research as a means to improve teaching and learning.

### **EEMP 504**

#### **Environmental Chemistry**

#### **Credit Hours: 3**

This course covers current analytical techniques, and provides the scientific background and skills needed for research in environmental chemistry. Topic areas include the development of advanced technologies and materials for air and water purification and for the saving and storage of energy, water and air pollution control, soil and sediment remediation, environmental technology, chemical limnology, and groundwater chemistry. Students design mass and energy flows and quantify matter transformations, in particular those of pollutants; analyze scientific literature; describe and evaluate the role of compounds and processes in soil, water and air at the molecular-mechanistic level; identify effects and toxicity of pollutants on living organisms; and evaluate methods for the study of eco-toxicology and risk assessment.

### **EEMP 505**

#### **Env. trans. & water resources**

#### **Credit Hours: 3**

The course covers the integration of two modern fields of study, environmental hydraulics and water quality modelling. It deals with the development and application of models that integrate our current understanding of the transport and transformation of materials to predict the fate of those materials in the natural environment. The course includes the engineering applications of the hydrodynamic principles to predict the fate and transportation of pollutants in the environment. Emphasis is divided between groundwater, coastal engineering and atmospheric transport.

### **EEMP 506**

#### **Micro. process in env. Systems**

#### **Credit Hours: 3**

This course focuses on microbiological processes that may be applied to a broad range of environmental concerns. Wastewater Characteristics, Chemical and Biochemical Oxygen Demand, Kinetics of Suspended-Growth Biological Processes, Kinetics of Attached-Growth Biological Processes, Nitrification, Denitrification, Biotransformation of Hazardous Compounds are some of the topics covered in this course.

### **EEMP 507**

#### **Env. systems and modelling**

#### **Credit Hours: 3**

Systems analysis is at the heart of engineering and this is what allows both quantitative analysis of both environmental problems and technologies. This course covers mathematical modelling that includes mass and energy balances, kinetics, transport, reactor theory, and modelling approaches for air, surface and groundwater and treatment systems. In this course, students learn to use the MatLab software package for modelling. Topics discussed in Environmental Systems and Processes: Principles, Modelling, and Design include: fluid flow and mass transport; passive and reactive interphase mass transfer; elementary and complex process rates; ideal, hybrid, and non-ideal system modelling and design; and multiphase and interfacial process dynamics and design.

#### **Prerequisite**

### **EEMP 505**

### **EEMP 508**

#### **Env. Measurements & stat. lab**

#### **Credit Hours: 1**

This practical course consist of a series of laboratory experiments that enable the students to plan/hypothesize, design, and execute laboratory experiments of various complexity, collect and analyze data, write technical reports, and make presentations of their research outcome. Experiments include: Reactor operations, Physio-chemical processes such as Water Softening and Colour Removal by Coagulation/Flocculation, Membrane Filtration, Biological Processes such as: Biofilms Development Kinetics.

### **EEMP 509**

#### **Phy.-chem. Proce. in env. Sys**

#### **Credit Hours: 3**

This is an advanced graduate course in water treatment, with a broadened focus on physical-chemical processes. The course retains a strong emphasis on water treatment, however,

because of its process-based nature; the same concepts can be applied to waste treatment, site remediation and pollutant transport. This course focuses on regulatory and control trends, and environmental impact determinations as well as Government and municipal regulations.

ground water protection systems at hazardous waste disposal sites and facilities; biological warfare.

#### **Prerequisite**

**EEMP 504**

**EEMP 622**

**Hazard. Waste & Con. Sit. Mana**

**Credit Hours: 3**

This course covers integrated waste management, functional and fundamental properties of hazardous waste, toxicological properties of contaminants, contaminant release mechanisms, fate and transport of contaminants in the environment, contaminated site assessment principles, Quantitative Human Health Risk Assessment (QHHRA) as applied to contaminated sites, hazard identification, exposure pathway analysis, risk characterization, risk management and site remediation, methods of hazardous waste treatment and contaminated site remediation, secure land disposal of hazardous waste and contaminated soils and sludges.

#### **Prerequisite**

**EEMP 504**

**EEMP 623**

**Marine Env. & Human Develop.**

**Credit Hours: 3**

The course focuses on key aspects of the interface between human development and environmental sustainability of the marine environment including the influence of economic growth, social development and environmental management; sustainable use and access to water; management and conservation of the marine environment; and the influence of climate change on human development. The major environmental challenges that Qatar faces and that need to be resolved effectively are considered, particularly achieving water security, reducing carbon emissions, increasing energy efficiency, and reducing risks that threaten the safety of the marine environment. Emphasis is placed on cross-reference to other courses dealing with regulatory and policy issues.

#### **Prerequisite**

**EEMP 504**

**EEMP 624**

**Environmental Sustainability**

**Credit Hours: 3**

This course covers products, contexts and capacities; life cycle design; minimizing resource consumption; product lifetime optimization; extending the lifespan of materials; system design for eco-efficiency; methods and support tools for environmental sustainability analysis and design; and evolution of sustainability in design.

**EEMP 625**

**Industrial Waste Water Treat.**

**Credit Hours: 3**

This course covers treatment of industrial water from refining, petrochemical and gas processing industries; Oil separation, flocculation, sedimentation, flotation, treatment of spent caustic, cooling water systems, protection against scale and corrosion.

#### **Prerequisite**

**EEMP 506 AND EEMP 509**

**EEMP 626**

**Clean Energy Resources**

**Credit Hours: 3**

This course covers the emissions from industrial activities, energy systems, power plants, renewable energy; solar and wind, photovoltaic power generation, geothermal energy, energetic use of biomass.

**EEMP 527**

**Research Strateg. & Methods**

**Credit Hours: 3**

This course is an introduction to research methodologies including literature review techniques, record keeping, technical report and scientific paper writing, experimental design, statistical analysis, usage of specialist software in research.

**EEMP 628**

**Special Topics in Envi. Eng.**

**Credit Hours: 3**

This is a course on specialized topics relevant to environmental engineering. It may also be offered to specific students to enable them to pursue advanced studies in particular areas under the direction of a faculty member, which must be arranged and approved prior to registration.

**EEMP 629**

**Atmo. Pollu. & Air Qua. Manag.**

**Credit Hours: 3**

This course covers Clean Air Act quality, emission standards, sources and effects of air pollution, air pollution from fuel combustion, fuel pre-cleaning, control of particulate matter (gravity settlers, cyclones, electrostatic devices, scrubbers and filtration), control of VOCs, SO<sub>x</sub>, and NO<sub>x</sub>, adsorption and absorption of air pollutants, and Air Pollution Control.

#### **Prerequisite**

**EEMP 504**

## **EEMP 530**

### **Envi. Assess. & Manag**

**Credit Hours: 2**

This course includes review of EIA basics: definitions, cause-effect mechanisms, description of engineered activities and baselines, environmental impact predictions, testing and monitoring of effects, project evaluation and decision making for engineering design, and impact management of engineered facilities, environmental management plans and audits, communication with stakeholders, and review of projects.

## **EEMP 591**

### **Industrial Master Project**

**Credit Hours: 2**

This is a one-term project which offers students the opportunity to work on a comprehensive research or design project under the supervision of one or more faculty members, which must be arranged and approved prior to registration. A written proposal, progress reports, and a final report are required.

### **Prerequisite**

**EEMP 530**

## **EEMP 595**

### **Master Thesis I**

**Credit Hours: 1**

This course is the first of a two-term thesis which offers students the opportunity to work on a comprehensive research or design project under the supervision of one or more faculty members, which must be arranged and approved prior to registration. A written proposal, progress reports, and a final thesis are required.

### **Prerequisite**

**EEMP 508**

## **EEMP 596**

### **Master Thesis II**

**Credit Hours: 3**

This course is the second in the sequence of a two-term thesis which offers students the opportunity to work on a comprehensive research or design project under the supervision of one or more faculty members, which must be arranged and approved prior to registration. A written proposal, progress reports, and a final thesis are required.

## **EEMP 695**

### **Master Thesis**

**Credit Hours: 3 TO 6**

The thesis offers students the opportunity to work on a comprehensive research or design project under the supervision of one or more faculty members, which must be arranged and approved prior to registration. A written proposal, progress reports, and a final thesis are required.

## **EEMP 721**

### **Solid Waste Management**

**Credit Hours: 3**

This course deals with solid waste handling through lectures, case studies, assignments and field visits. The course covers the different types of waste with a primary focus on treatment, disposal techniques, underlying principles of management options, and environmental impacts. It addresses problems associated with activities such as open dumping, landfill, composting, incineration, and non-incineration thermal techniques. The course covers evaluation of ground water pollution at disposal sites; designs of ground water protection systems at hazardous waste disposal sites and facilities.

## **EEMP 724**

### **Environmental Sustainability**

**Credit Hours: 3**

This course covers products, contexts and capacities; life cycle design; minimizing resource consumption; product lifetime optimization; extending the lifespan of materials; system design for eco-efficiency; methods and support tools for environmental sustainability analysis and design; and evolution of sustainability in design; it's impacts and use.

## **EEMP 725**

### **Industrial Waste Water Treatment**

**Credit Hours: 3**

This course covers the treatment of industrial wastewater from refining, petrochemical, gas processing and other chemical industries and facilities. The course focuses on the knowledge related to the composition, treatment and effective disposal of industrial effluents, understanding the various terms used in industrial wastewater treatment, waste minimization methods, principles and design of treatment methods. Processes including oil separation, flocculation, sedimentation, flotation, treatment of spent caustic, cooling water systems, will be addressed amongst others.

## **EEMP 733**

### **Renewable and Sustainable Energy Systems**

**Credit Hours: 3**

This course provides a graduate level understanding of the conversion principles and technology behind various renewable energy sources. The course examines issues involved in the integration of various renewable energy sources and their economics for heat, power, and transportation needs amongst other topics. Based on the technical and sustainability challenges, the future outlook for each of the sources and systems is discussed. New trends in sustainable energy systems are considered.

## **EEMP 751**

### **Advanced Special Topics in Environmental Engineering I**

**Credit Hours: 3**

The course addresses new and specialized trends and topics relevant to environmental engineering. The course covers emerging advanced theoretical and practical issues in

environmental engineering. It enables the students to conduct advanced statistical analysis of experimental data. It may also be offered to specific students to enable them to pursue advanced studies in particular areas under the direction of a faculty member, which must be arranged and approved prior to registration.

## **EEMP 752**

### **Advanced Special Topics in Environmental Engineering II**

**Credit Hours: 3**

The content of these special topics varies to cover emerging advanced theoretical and practical issues in Environmental Engineering.

## **EEMP 899**

### **PhD Thesis**

**Credit Hours: 0 TO 48**

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.

### **Prerequisite**

**EEMP 595 AND EEMP 527**

## **ELEC 551**

### **Advanced Topics in Elec. Eng.**

**Credit Hours: 3**

A selection of state-of-the-art topics on electrical engineering.



## **ELEC 552**

### **Power Sys. Dynamics & Control**

#### **Credit Hours: 3**

Dynamic performance of power systems with emphasis on stability. Modeling of system components including FACTS devices and control equipment. Analysis of the dynamic behavior of the power system in response to small and large disturbances.

## **ELEC 553**

### **Advanced Energy Distribution Engineering**

## **ELEC 554**

### **Adv. Top. in Ele. Pow. S. Eng.**

#### **Credit Hours: 3**

A selection of state-of-the-art topics on electric power system engineering that spans both theoretical background and practical application considerations.

## **ELEC 555**

### **Statistical Signal Processing**

#### **Credit Hours: 3**

Foundations-Stochastic process in continuous-time and discrete-time with its first and second order description, sampling process, stochastic dynamical models, simulation of stochastic processes, basics of constrained and unconstrained optimization; Basics of estimation theory - parameter estimation, adaptive filtering, optimal filtering; Basics of detection theory - hypothesis testing, sequential detection, detection of signals in noise; Markov Decision Processes; Compressive sensing. Case studies in wireless communications and target tracking.

## **ELEC 556**

### **Advanced Comm. Engin.**

## **Credit Hours: 3**

Fading channel characterization and simulation; Performance of digital modulation in fading and inter-symbol interference; Capacity of wireless channels; Flat fading countermeasures, diversity, coding and interleaving, adaptive modulation; Multiple antenna systems (MIMO); Inter-symbol interference countermeasures, equalization, multi-carrier modulation, spread spectrum and RAKE receivers; Multiple access, modern cellular systems, modern data networks, and ad-hoc networks. Particular emphasis is placed on the interplay between concepts and their implementation in systems.

## **ELEC 561**

### **Advanced Digital Signal Processing**

#### **Credit Hours: 3**

Discrete signals and systems; Discrete-time Fourier Transform; Z transform; Digital filter design. Discrete Fourier transforms. Fast Fourier Transform; linear and circular convolution; overlap-add method; FIR Digital filters; IIR Digital filters; Digital Spectral Analysis; Time-Frequency analysis and the spectrogram; Blind source separation; array processing; signal enhancement; applications to voice, EEG and ECG analysis; introduction to 2D signals and t-f images.

## **ELEC 601**

### **Advanced Topics in Electrical Engineering**

#### **Credit Hours: 3**

A selection of state-of-the-art topics on electrical engineering

## **ELEC 602**

### **Advanced Energy Distribution Systems**

#### **Credit Hours: 3**

This course addresses advanced energy distribution systems spanning the following topics: Main Concepts of Electric Distribution Systems. Load Demand Forecasting. Voltage Variations. Power Factor Improvement. Harmonics in Electric Distribution Systems. Harmonics Effect Elimination. Demand Side Management and Energy Efficiency. Distributed Generation. Smart grid and microgrids.

## **ELEC 603**

### **Advanced Topics in Electric Power System Engineering**

#### **Credit Hours: 3**

A selection of state-of-the-art topics on electric power system engineering that spans both theoretical background and practical application considerations

## **ELEC 604**

### **Advanced Wireless Communications**

#### **Credit Hours: 3**

Overview on fundamental knowledge in stochastic process, Gaussian random process, vector space, signal space and detection theory. Wireless fading channels stochastic modeling and characterization both in the continuous and discrete case. Diversity techniques in time, frequency and space and their corresponding performance effect and the diversity order. Information theoretic approach to wireless communication system including capacity of AWGN channel and for fading channels. MIMO systems capacity, degrees of freedom and space time coding techniques.

## **ELEC 605**

### **Bioinstrumentation**

#### **Credit Hours: 3**

Biomedical engineering is the study of how the human body functions from an engineering perspective. An essential part of the functionality concerns the determination and analysis of signals generated within the body. Bioinstrumentation presents a means whereby the signals are measured, monitored and analyzed. This module concentrates on the extraction, processing and manipulation of the signals to aid in the therapeutic and diagnostic process

## **ELEC 653**

### **Advanced Topics in Power Electronics**

#### **Credit Hours: 3**

Advanced Topics may include “but are not limited to” the followings: Protection of semiconductor devices and drive circuits; Modeling and control of power electronics systems, PWM converters and applications; Resonant converters and control, Switching power supplies design; applications of power electronics to renewable energy, power system and drives. Power quality and FACTS applications. Energy Conservation and Management. Simulation and implementation of power electronics converters.

## **ELEC 654**

### **Advanced topics in Electric Machines and Drives**

#### **Credit Hours: 3**

Advanced Topics may include “but are not limited to” the followings: Principles for electric machine analysis. Electromechanical energy conversion concept. Winding inductances and voltage equations. Reference-frame theory. Generalized theory of Induction and synchronous machines. Linearized equations of induction and synchronous machines. Reduced-order equations of induction and synchronous machines. Unbalanced Operation of induction and synchronous machines. Asynchronous operation of synchronous machine. Symmetrical and Unsymmetrical Two-Phase Induction Machines. Introduction to modern electrical drives. DC, induction and synchronous motor drives. Switched reluctance drive systems. Brushless DC Motor Drives. Simulations of induction and synchronous machines.

## **ELEC 655**

### **Advanced Topics in Control System Theory**

#### **Credit Hours: 3**

Advanced Topics may include “but are not limited to” the followings: Optimal Control, Nonlinear Control, Intelligent Control, Multi-Variable Control and Robust Control.

## **ELEC 656**

### **Advanced Digital Communication**

#### **Credit Hours: 3**

An overview of the designs of digital communication systems; The mathematical foundation of decomposing the systems into

separately designed source codes and channel codes as well as overview of joint design; The principles and some commonly used algorithms in each component; The basics of information theory; Single-carrier digital transmission systems; Digital communication through fading multipath channel; Diversity techniques, Outage probability and outage capacity; Statistical signal processing principles with applications in adaptive equalization and channel estimation; Modern communication system case studies.

## **ELEC 657**

### **Biomedical Signal Processing and Diagnostics**

#### **Credit Hours: 3**

Engineering and human senses; brain studies and EEG; electrical activity and disorders; heart, ECG and prevention of heart attacks; eye, perception and image processing; human body as a communication system (auditory system, speaker and speech analysis); DSP and Filtering; Time-Frequency modelling; Biomedical processes and systems modelling; Artifacts filtering; Event change detection; Pattern classification; automatic medical diagnostics.

## **ELEC 658**

### **Medical Imaging**

#### **Credit Hours: 3**

Provides an overview of the principles and techniques of digital image processing in applications related to digital imaging system design and analysis. Covers the following topics: analysis and implementation of image and video processing algorithms and standards, methods and filters for image enhancement and restorations, color theory, source and transform coding techniques for lossless and lossy compression, and basic elements of video processing systems.

## **ELEC 659**

### **Communication and Information Theory**

#### **Credit Hours: 3**

Mathematical models for channels and sources, the basic concepts of entropy, relative entropy, and mutual information are defined, and their connections to channel capacity, coding,

and data compression are presented; Limits for error-free communication, channel capacity; Limits for data compression and source coding; Shannon's theorems and rate distortion theory; Basics of coding for noisy channels, linear block codes, cyclic codes, convolutional codes, maximum likelihood decoding.

## **ELEC 660**

### **Communication Network**

#### **Credit Hours: 3**

A course on the basics of data communication network protocols, basics of queuing theory, basics of multiple access techniques, methods of performance analysis and simulations.

## **ELEC 661**

### **Power System Dynamics and Control**

#### **Credit Hours: 3**

Dynamic performance of power systems with emphasis on stability. Modeling of system components including FACTS devices and control equipment. Analysis of the dynamic behavior of the power system in response to small and large disturbances.

## **ELEC 662**

### **Advanced Digital Signal Processing**

#### **Credit Hours: 3**

Discrete signals and systems; Discrete-time Fourier Transform, AD-DA Conversions, Over- and Under-Sampling, Multirate DSP; Z transform; Digital filter design, Optimal Filtering. Discrete Fourier Transform. Short-Time Fourier Transform; linear and circular convolution; overlap-add method; Time-Frequency analysis and the spectrogram; signal enhancement; applications to audio, EEG and ECG analysis.

## **ELEC 665**

### **Statistical Signal Processing**

#### **Credit Hours: 3**

Foundations - Stochastic process in continuous-time and discrete-time with its first and second order description, sampling process, stochastic dynamical models, simulation of stochastic processes, basics of constrained and unconstrained optimization; Basics of estimation theory - parameter estimation, adaptive filtering, optimal filtering, probabilistic design of signal processing algorithms: maximum likelihood and Bayesian strategies

## **ELEC 698**

### **Master Thesis**

#### **Credit Hours: 0 TO 12**

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion.

## **ELEC 708**

### **Advanced Optimization Methods**

#### **Credit Hours: 3**

The course presents advanced optimization techniques focusing on the recent approaches and methodologies. Then it covers the applications of optimization on various Electrical Engineering areas. Emphasis is on methodology and the underlying mathematical structures. Optimization methods include: Unconstrained vs. constrained optimization, Global optimization methods, Golden-section search, Fibonacci search, Linear Programming, Simplex method, Nelder-Mead Search, Gradient (descent) methods, the method of the steepest descent, Newton-Raphson method, linear and non-linear least squares, Gauss-Newton method, Simulated Annealing, Stochastic Approximation, and Evolutionary Optimization methods

## **ELEC 751**

### **Advanced Special Topics I**

#### **Credit Hours: 3**

A selection of the state-of-the-art advance topics in Electrical Engineering

## **ELEC 752**

### **Advanced Special Topics II**

#### **Credit Hours: 3**

A selection of the state-of-the-art advance topics in Electrical Engineering

## **ELEC 753**

### **Time-Frequency Signal Processing**

#### **Credit Hours: 3**

Signal time-frequency characteristics; time-frequency signal design; analytic signal; instantaneous frequency; time-varying spectral analysis; Wigner-Ville Distribution; quadratic time-frequency distributions; optimal design; efficient implementations; IF estimation; detection and classification methodologies; performance measures; noise filtering and signal enhancement; real life applications in communications, geophysics, engineering diagnosis and biomedicine.

## **ELEC 758**

### **Multimedia Processing**

#### **Credit Hours: 3**

Provides an overview of the principles and techniques of digital image processing in applications related to digital imaging system design and analysis. Covers the following topics: analysis and implementation of image and video processing algorithms and standards, methods and filters for image enhancement and restorations, color theory, source and transform coding techniques for lossless and lossy compression, and basic elements of video processing systems.

## **ELEC 763**

### **Electric Power Generation by Renewable Sources**

#### **Credit Hours: 3**

This course will introduce the students to the concepts of electric power generation by renewable energy systems in general and photovoltaic and wind systems in particular. It covers the aspects of how to design, analyze, and evaluate the technical and economic viability of the renewable energy power generation system applications through class projects.

## **ELEC 764**

### **Modern Radio-Frequency Communication Systems**

#### **Credit Hours: 3**

Topics cover concept, analysis, and design of communication systems using microwave-engineering concepts in discrete and IC devices. The main components of the course content are noise and intermodulation distortion in communication circuits, frequency-selective networks, modulators and demodulators, frequency synthesizers, frequency up- and down-conversion (i.e. mixing), and Phase-Locked Loops. This is in addition to CAD tools for design and simulation of electronic circuits and systems that will be intensively used by students for term-projects, homework, and free design projects

## **ELEC 767**

### **Machine Learning**

#### **Credit Hours: 3**

The course presents an overview of crucial concepts, methods, and algorithms in optimization and machine learning (ML), starting with fundamentals of optimization, supervised and unsupervised learning, classification and linear regression. The focus will then be on more recent topics such as Evolutionary Optimization, Support Vector Machines, Artificial Neural Networks, and Convolutional Neural Networks. The course will give the basic ideas and intuition behind modern ML methods as well as a bit more formal understanding of how, why, and when they work.

## **ELEC 768**

### **Nonlinear Control Systems**

#### **Credit Hours: 3**

Introduction to nonlinear and time-varying systems. Techniques for the stability analysis of nonlinear and time-varying systems. Internal stability of feedback systems. Lyapunov stability theorems. Overview of design for nonlinear systems. Jacobian linearization and gain scheduling. Introduction to feedback linearization and extensions of optimal control techniques. Direct design methods

## **ELEC 769**

### **Detection and Estimation Theory**

#### **Credit Hours: 3**

The theory of detection and estimation with applications to communication systems, radar systems, and control systems, ; introduction to random processes; decision-theory concepts and optimum-receiver fundamentals; detection of deterministic signals in noise, detection of random signals in noise, coherent and noncoherent detection; parameter estimation, linear and nonlinear estimation; and filtering.

## **ELEC 899**

### **PhD Thesis**

#### **Credit Hours: 0 TO 48**

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.

## **ENGL 202**

### **English Language I Post Foundation**

## **Credit Hours: 3**

This course is designed to help students improve their academic writing ability, and to ensure that they are prepared for the more advanced writing and research skills introduced in English 2. Emphasis is placed on understanding information from authentic texts. Academic vocabulary is taught through inference and context. A collaborative community environment is encouraged, whereby students learn to provide and accept relevant, focused feedback to and from their peers. Throughout the semester, students create and develop an e-portfolio.

## **ENGL 203**

### **English Language II Post Foundation**

#### **Credit Hours: 3**

English 203 is an advanced academic writing course which provides an opportunity for students to learn and practice the skills needed for a guided university-level academic paper related to their field of study. The course emphasizes the development of academic writing skills as well as the ability to read and think critically. Students will learn to use the library and appropriate online resources to find and evaluate sources to inform, develop and support their ideas in term paper writing.

## **EMP 503**

### **Bus Fundmntls for Eng Managers**

#### **Credit Hours: 3**

Introduction to business fundamentals in the areas of cost accounting, cost analysis, financial accounting, marketing, and human resources management.

## **EMP 504**

### **Process Improvement Techniques**

#### **Credit Hours: 3**

Concepts of work, role of product & process design in improvements, techniques for work analysis, principles of method improvement at operator, process, line, and organizational levels, Concepts of process mapping & charting

at various levels, understanding various types of wastes and their removal, concepts of lean operations and management, lean sigma and case studies.

## **EMP 505**

### **Project Management**

#### **Credit Hours: 3**

Role of projects in organization's competitive strategy; standard methodologies for managing projects; project life cycle; design-implementation interface; estimating: preliminary and detailed; contractual risk allocation; scheduling: PBS; WBS; integration of scope, time, resource and cost dimensions of a project; evaluation of labor, material, equipment, and subcontract resources; scheduling techniques including CPM/ PERT, GERT, critical chain; solving real world project schedules; Monte Carlo simulation; cost budgeting; cost baseline; cash flow analysis; earned value analysis; cost control; proposal presentation; application of software for project management.

## **EMP 506**

### **Production and Ops Management**

#### **Credit Hours: 3**

This course offers a comprehensive overview of Production and Operations Management to enable the students to understand Production and Operations Management tasks related to product development and design and production planning and production. Uses general principles and selected models and methods to work on Production and Operations Management problems.

## **EMP 507**

### **Entrp Info Anlysis and Bus App**

#### **Credit Hours: 3**

This course includes types of information and fundamentals of information systems, business processes, organizations and systems, the relational data bases, architecture and logical data base design, Information & decision making, understanding the information requirements of an enterprise—understanding user interface, design and implementation of forms and reports



based working for varied user requirements, introduction to E-commerce and fundamentals of enterprise applications.

### **EMP 508**

#### **Decsn Techn and Data Analysis**

##### **Credit Hours: 3**

Quantitative methods for interpreting and understanding data; the use of partial information derived from random samples; and techniques summarizing applications, quantitative and qualitative aspects of problem solving and decision-making, includes: structuring and basics of decision-making, application of probability, functional relationships, marginal analysis and linear programming.

### **EMP 511**

#### **Physical Distrib Management**

##### **Credit Hours: 3**

This course includes scope, functions, strategy and planning for physical distribution, order processing, selecting warehouse location, inventory storage, calculating cost, freight and storage fee, transportation management and organization, packaging, methods and techniques for physical distribution management.

### **EMP 512**

#### **Procurement Management**

##### **Credit Hours: 3**

This course provides students with a detailed view of the integration for project and procurement life cycles, defining roles and responsibilities for the project procurement and contracting function, integrating procurement and contracting (P-C) planning with up-front project planning, and managing the procurement and contracting scope as a project. In addition, it includes discussion on topics such as performance-based contracting, economic analysis tools and quality programs.

### **EMP 513**

#### **Suppliers Management**

##### **Credit Hours: 3**

This course covers strategies for creating value through supply alliances. Topics include the scope, structure and dynamics of strategic relationships; how to work with different external and internal organizational structures; how to evaluate a relationship for alliance potential, including a real-world opportunity to work on a relationship of your choice; how to incorporate a purchasing/ supplier alliance into your organization; how to plan, negotiate, implement and monitor/ manage alliance relationship in your organization's supply strategy and operations; and to recognize and address cultural and organizational barriers to forming positive relationships.

### **EMP 514**

#### **Supply Chain Management**

##### **Credit Hours: 3**

The course covers supply chain operating practices and principles (i.e., the fundamentals of materials and logistics management). Topics includes analyzing the dynamic nature of supply chain management for products and services, the impact of the global economy on the supply chain management process, strategies for customer service, quality, logistics management, inventory management, forecasting, postponement, sourcing (in particular, global sourcing), network design, and virtual integration (web-centric) and integrated supply chain management , practices and performance measures to diagnose supply chain performance and to develop supply chain strategies. Topics include the formulation of supply chain management strategies that would integrate with companies' e-business strategies and practices and develop action plans for upgrading the supply chain practices and supporting ICT systems to deliver improved supply chain performance.

### **EMP 515**

#### **Materials and Logistics Mang**

##### **Credit Hours: 3**

Includes Material Classification, Codification, Standardization and Variety Reduction, Operating Cycle: Working Capital Turn-Over Ration; Role And Functions Of Purchasing; Vendor Development And Rating Systems; Material Requirement

Planning For Dependent Demand Items, Logistics System Design, Demand Planning, Multiple Channel Distribution, Concept of Warehousing, Warehousing Locations, Method Of Storage, Primary and Secondary Transportation, Logistic Costing, Logistic Information Systems, Integrating all activities for effective supply chain performance.

### **EMP 521**

#### **Facility Planning & Layout**

##### **Credit Hours: 3**

Covers fundamentals of facilities planning and design; facilities planning models including location selection and location allocation modeling; product, process and schedule design; flow, space and activity relationships as well as personnel requirements; material handling equipment selection and materials handling systems, systematic layout planning and computer aided layout improvements and design, storage and warehouse system.

### **EMP 522**

#### **Service Operations Management**

##### **Credit Hours: 3**

Provides an understanding of Services, how the operations and management of services is different from manufacturing, role of services in the economy and value chains, service strategies and competitiveness of value chain, design of services, service systems and the various considerations, managing and operating services, service considerations for select sectors such as health care, public and private nonprofit organizations, global performance aspects of services.

### **EMP 523**

#### **Six Sigma and Stratg Qual Mang**

##### **Credit Hours: 3**

This course covers the concepts of Six Sigma methodology and how to improve the quality of manufacturing and business process improvement. Topics include measuring, evaluating and improving performances in conjunction with Six Sigma methodology and Quality Function Deployment (QFD), loss

function; system, parameter and tolerance design using statistically designed experiments.

### **EMP 524**

#### **Systems Analysis and Design**

##### **Credit Hours: 3**

This course introduces systems analysis and design methods, techniques and tools that organizations use to assess how computer based technologies can most effectively add value to the enterprise. The course covers a systematic methodology for analyzing an organizational problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the needs, articulating organizational requirements for the technology solution, specifying alternative approaches to acquiring the technology capabilities needed to address the organizational requirements, and articulating the specifications for the information systems solution.

### **EMP 526**

#### **Innovation and Tech Management**

##### **Credit Hours: 3**

This course covers the process and dynamics of innovation and characteristics of different types of innovations, relations between innovations, technology and product development, dynamics of technological evolution and technological shifts, social and human side of innovations, technology development incremental and radical, and product development, impact of creativity in fostering innovations and motivating professional people in technologically oriented corporations, organizational and managerial aspects of organizing product development in concurrent engineering way in cross-functional teams and exploring barriers to integration, principles of new approaches in managing complex systems, exploring Information Driven Management (IDM) approach and Self-Organizing principles, exploring the principles of Dependence Structure Matrix (DSM) and Domain Mapping Matrix (DMM) in managing complexity and uncertainty.

**EMP 531****Construction Engineering Mang****Credit Hours: 3**

Includes macro-level principles and practice of construction engineering and project management, introduction to Project planning, development of cost estimates and project schedules, construction methods and fundamental terminology used in the engineering and construction industry, introduction to project management processes, the owner’s study & project evaluation methods, formation of project teams, project coordination in construction, and project closeout.

**EMP 532****Est and Fin Anlys for Cnstruct****Credit Hours: 3**

This course covers the construction industry, its makeup, operation, estimating and bidding procedures, theory and practice of estimating materials, labor, equipment and overhead costs for various types of construction. Emphasis is on preliminary cost estimates during the conceptual design phase of a construction project.

**EMP 533****Construction Equipment Managmt****Credit Hours: 3**

Includes analysis of construction equipment, performance under various operating conditions, application of engineering fundamentals to construction methods, selection of equipment production rates, and unit costs of work in place.

**EMP 534****Cnstr Ctrct & Lgl Cncpt Cnstr****Credit Hours: 3**

Includes the nature of contracts, contract documents, master format, principles of specification writing, contract types, bonds and insurance, bidding, subcontracting, methods and

techniques of tracking and control of construction projects, contract administration, evaluation of current research findings top contract implementation, managing the pre-award and the post award phases of construction projects, legal concepts in construction projects, and claim analysis.

**EMP 525****System Analysis and Design****Credit Hours: 3**

This course introduces systems analysis and design methods, techniques and tools that organizations use to assess how computer based technologies can most effectively add value to the enterprise. The course covers a systematic methodology for analyzing an organizational problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the needs, articulating organizational requirements for the technology solution, specifying alternative approaches to acquiring the technology capabilities needed to address the organizational requirements, and articulating the specifications for the information systems solution

**EMP 535****Concrete Formwork Design****Credit Hours: 3**

Includes design of formwork for concrete structures, analysis of loads, deflections, and stresses of forming systems, evaluation of economics of formwork design.

**EMP 536****Project Plang Sched and Cntrol****Credit Hours: 3**

This is a project planning course in the principles and practice of scheduling and control management, pre-project planning, development of critical path methods, and project schedules, fundamental cost and schedule analysis, and earned value concepts used in the engineering and construction industry, linear scheduling techniques and scheduling techniques based on artificial neural networks, Building Information Modeling (BIM) technique for construction projects, integration of

project planning & modeling techniques, 5D planning & scheduling of construction projects.

**EMP 537****Eng and Cnstr Mtrials and Meth****Credit Hours: 3**

Covers the analysis of engineered materials for construction and project operations, examination and analysis of construction methods for civil engineering projects, management of engineered materials development of site operations and analysis of construction methods and materials.

**EMP 591****Master Project****Credit Hours: 3**

Students may choose and pursue an intensive practical project base derived from industry or other related areas. The work culminates in a project report that is evaluated and approved by the student advisory.

**EMP 595****Master Thesis I****Credit Hours: 0 OR 3**

Students may choose and pursue a major research topic with their respective supervisor(s). The work culminates in a thesis report that is approved by the thesis supervisor before submission to the thesis examination committee. The course is considered pass/fail.

**EMP 596****Master Thesis II****Credit Hours: 0 OR 3**

This course is the continuation of EMP 595; it represents the completion of the thesis started in EMP 595.

**Prerequisite****EMP 595****EMP 651 Advanced Special Topics I****Credit Hours: 3**

Selected topics from specialized areas of engineering management or a related discipline aimed at broadening or deepening the student’s knowledge and skills in the preparation of her/his dissertation. The specific contents of the course are published one semester in advance.

**EPSY 510****Educational Psychology****Credit Hours: 3**

This course focuses on applying psychological theories and principles to learning and instructional processes. The content includes the study of learning theories, motivation, measurement and evaluation in educational settings, in addition to studying the cognitive, emotional and social development of the learner. The course also focuses on developing the teachers’ skills and enhancing their ability to support effective learning, manage the learning environment, and identify and deal with individual differences of their students.

**FINA 201****Principles of Finance****Credit Hours: 3**

This course emphasizes the financing and investment decisions of the financial manager. Topics include financial analysis, planning and control, working capital management, time value of money, risk and return, valuation of bonds and stocks, capital budgeting, and cost of capital.

**FINA 501****Introduction to Finance**

**Credit Hours: 3**

This course establishes the foundations for corporate finance and investment decisions of the financial manager. Topics include financial analysis, cash flow, working capital management, the time value of money, risk and return, stock valuation, bonds valuation, capital budgeting, cost of capital and dividend policy.

**FINA 605****Corporate Finance****Credit Hours: 3**

The objective of the course is to provide an understanding of the nature of business finance, financial planning and analysis tools and help students acquire the necessary skills to be able to take important financial decisions which add and protect value to the corporation such as, the decision of financing investments and efficient resource allocation. The course also deals with the different types of risks that faces the financial manager, and how to incorporate these risks in financial decision making.

**FINA 607****Investment Analysis and Portfolio Management****Credit Hours: 3**

This course establishes the foundations for analysis of optimal security selection, examines procedures for constructing investment portfolios, and considers strategies that investors can employ to meet various alternative investment objectives. Selection of individual investments is discussed within the context of portfolio creation, target returns, and risk tolerance and management. Other topics include, Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT) and efficient capital markets. The empirical tests of these theories will also be discussed.

**FINA 608****Financial Analysis and Valuation****Credit Hours: 3**

This provides students with hands-on experience in financial statement analysis. Students will be exposed to general tools of financial analysis, theoretical concepts, and practical valuation issues. Financial analysis requires understanding of the economic characteristics and current conditions of a firm's business in addition to the nature of its financial statements. Students will integrate the concepts of accounting, finance, economics, and other business disciplines in order to analyze firm's financial results, project future performance and estimate firm's market value.

**FINA 610****Derivatives&Financial Engineering****Credit Hours: 3**

The purpose of this course is to provide students with the necessary skills to value and use options, futures, and related financial contracts in corporate risk management. The topics explored are of high technical level. These topics include the valuation of futures contracts on stock indices, on commodities and Treasury instruments; the valuation of options; empirical evidence; strategies with respect to these instruments; insurance; swaps; and the use (and misuse) of derivatives in the context of corporate applications

**FINA 613****Research Methods in Finance****Credit Hours: 3**

This course aims at helping students to turn financial theory into testable hypotheses. The course uses quantitative methods to analyze financial data with the objective of helping students to write research papers in finance. The course topics include research design, framing testable hypotheses, survey design, probability and probability distributions; statistical inference; regression analysis and time series analysis.

**FINA 615****Advanced Islamic Banking & finance****Credit Hours: 3**

This course examines the core principles of Islamic banking and finance. Its aims are to develop an appreciation of the

Sharia compliant financial products and the rationale for the prohibition of Riba, Gharar, Maysir and Qimar. The course will look in detail at the financial techniques applied by Islamic banks with detailed analysis of Islamic asset and fund management and risk-sharing concepts (PLS model). Additionally, this course will examine the Islamic Sukuk and Takaful market.

**FINA 617****Financial Econometrics1****Credit Hours: 3**

The Financial Econometrics course draws from a variety of related disciplines to the unique characteristics of financial data. It aims to introduce students to a broad range of available econometric methods and their application. The course introduces popular tools along with their application to finance. It equips students with the basics to manipulate financial data and to master more advanced topics in econometrics.

**FINA 619****Financial Econometrics11****Credit Hours: 3**

The course of Financial Econometrics provides a solid grounding in advance developments in applied econometrics in Finance. A major feature of the course is the use of both analytical and computer-based (data) to analyze financial data This course will cover several topics including Vector Autoregressive (VAR), co-integration and switching models and dynamic panel data Models.

**FINA 620****Islamic Capital Markets&Institutions****Credit Hours: 3**

This course will provide an understanding of the structure and the principles driving Islamic Capital Market (ICM). It will also explore Islamic investment opportunities, securitization, fund, equities, indices, derivatives and hedge funds in Islamic finance. The course is planned to empower students to acquire a working knowledge of the role of Islamic financial institutions.

**FINA 625****Special Topics in Islamic****Credit Hours: 3**

This course will cover advanced practices and theories of risk management in Islamic banking and discuss their adequacy. The emphasis in this course will be on gaining a deep understanding of the different approaches of assessing the risk-weighted assets in Islamic banking. The goal of this course is to give students a comprehensive understanding of risk management in Islamic banking and finance.

**FINA 628****Risk Management in Islamic Finance****Credit Hours: 3**

The purpose of this course is to provide students with the necessary skills to handle and manage liquidity, operational, credit and market risks that face the Islamic-based institutions. The covered topics are of high technical level and considers the management of liquidity risk, operational, credit swaps, options and market risk

**FINA 630****Energy Financial Economics****Credit Hours: 3**

This course shows how legal/regulatory systems affect the energy industry, and the important economic and political concerns that underlie the regulation of production and sale of energy. It presents the country energy system, analysis tools and help students acquire the necessary skills to take important energy financial and economic decisions at both micro and macro level. The course deals with the issue of "political/regulatory and country risk" as it affects investment in the energy industry



## FINA 633

### Energy Risk Management

#### Credit Hours: 3

The objectives of this course are to investigate the evolving and expanding practice of risk management in the energy sector. Risk management is a complex process of identifying, quantifying and managing various risk exposures. The course analyses and discusses the various sources of risk. Particular attention is devoted to the main risk management techniques such as Value at Risk (VaR), volatility models, correlation models, oil and NG options and futures contracts.

## FINA 691

### Energy Finance Practicum

#### Credit Hours: 3

The Energy Finance practicum course offers the students with the main elements of financial analysis and reporting of the energy companies using both class and practical formats. The financial analysis and reporting principles allows the students to form groups and study the various aspects of the companies including the financial structure, figuring out the problems and the potential solutions facing the companies under study. Additionally, the students will be able to analyze the consequences of oil and gas volatility on the energy companies.

## FINA 692

### Special Topice in Energy Fina

#### Credit Hours: 3

This course examines the application of advanced models used in energy and private equity markets by energy companies. It analyzes the market trends affecting the investment behavior of sovereign institutions and provides investment advice and developing tailored investment solutions. Additionally, the course deals with merger and acquisition between energy companies regionally and globally. Additionally, the course deals with financing the renewable energy.

## FINA 698

### Finance Graduation Project

#### Credit Hours: 3

This course provides the practical side of Finance discipline within the Qatari economy. It shall reflect high level of consultancy capabilities in applied research within Qatari firms. Student have the opportunity to tackle problems related to different specific financial topics, including those from the two offered concentrations: Energy Finance and Islamic Finance.

## FINA 699

### Thesis

#### Credit Hours: 0 TO 6

The aim of the thesis in the M.Sc. in Finance program is to provide students with the necessary skills to carry out research. Students are expected to submit a research document tackling a well-defined research question related to the field of Finance. The main objectives of the research thesis are to develop skills in writing research document; identifying and using scientific research tools to solve marketing problems. Ultimately, students will gain a deep knowledge and understanding, and developed capabilities in conducting scientific research in the finance discipline.

## FINA 800

### Theory of Finance

#### Credit Hours: 3

The course seeks to study some of the seminal work in finance. It will also survey many current issues in finance academic research. The goal of this course is to give the students grounding in some of the classic issues in finance, but also introduce them early into the concept of what research is, and more explicitly, where it is. This course provides an in depth literature background for students interested in Corporate Finance Theory and in Asset Pricing.

## FINA 801

### Empirical Methods in Finance

#### Credit Hours: 3

The course focuses on applied work in finance. The aim of the course is to prepare students to PhD empirical research in finance. The course will cover portfolio theory, portfolio management, portfolio performance evaluation, and assets valuation. The course will cover empirical methods in quantitative finance in cross sectional, panel, and time series domains. Students are expected to search and update a topic of interest in finance. A major part of the course student's evaluation will be based on a submitted proposal that covers a specific topic in finance. The proposal will have a concise review of the literature and methodology used in the student's chosen area.

## FINA 802

### Current Issues in Finance

#### Credit Hours: 3

The objective of the course is to explore interesting research questions in finance. We will work toward this goal by introducing students to several advanced topics in finance and expose students some current issues. An emphasis will be put on the link between empirical and theoretical work, and how to think about research questions critically. Articles from the well-known refereed journals constitute the primary material for this course.

## FINA 803

### Fixed Income Securities

#### Credit Hours: 3

The course deals with recent developments in fixed income markets. The course emphasizes the empirical findings in the corporate and Government bond valuation literature. Throughout the course students will calibrate and implement fixed income models using corporate bonds data. Topics covered include interest rate risk and Government bond pricing using continuous-time term structure models. Credit risk is then introduced with corporate bonds through continuous-time term-structure models with stopping times. The recent advancements in the field of fixed income including structural models and reduced form models are deeply explored.

## FINA 804

### Financial Markets & Institutions

#### Credit Hours: 3

The course focuses on the operational mechanisms of financial institutions, particularly banks, mutual funds, investment banks, insurance companies, pension funds, and venture capital firms. The topics covered will be extended, but not limited, to cover the international financial system, financial regulation, risk management in financial institutions, financial crises in developed and emerging market economies, and Islamic banking.

## FINA 805

### Financial Risk Management

#### Credit Hours: 3

The course deals with the recent developments in financial engineering. These spectacular advancements increased substantially the challenges of risk management to offer hedging solutions. Accordingly, the main focus of this course is to strengthen the student's knowledge in risk management applied to investment and wealth management. Credit risk modelling and liquidity risk modelling may also discussed. Topics covered include volatility modelling using daily return data, dynamic correlation and beta, risk management using intraday data, and portfolio management using option data.

## FINA 806

### Islamic Banking and Finance

#### Credit Hours: 3

This course examines the core principles of Islamic banking and finance. Its aims are to develop an appreciation of the Sharia compliant financial products and the rationale for the prohibition of Riba (usury) in Sharia compliant financial instruments. The course will look in detail at the financial techniques applied by Islamic banks with detailed analysis of Islamic asset and fund management and risk sharing concepts (PLS model). Additionally, this course will examine the Islamic Sukuk (bonds) and Takaful (insurance) market.

## FIQH 605

### The Purposes of Islamic Law

#### Credit Hours: 3

This course discusses the concept and history purposes of Islamic Law, their jurisprudence and provides an overview on the issue of logical reasoning and its relationship with the purposes of Islamic Law. contents also include various classifications of these Purposes, means of identifying them, possibility of re-arranging or adding on to them, importance of Purpose oriented ijihad, its areas and principles, its role in social development and human rights, establishing a new discipline for purposes based on the axioms of Usul al-fiqh.

## FIQH 610

### Textual Study of Usul al Fiqh

#### Credit Hours: 3

The course is based on a textual study of the following works: Jam’ al-Jawami of Subki and his commentary on Mahalli’s work. This includes the definition of Islamic jurisprudence, the position of Mu'tazilis on arbitration of the mind, also includes defining terms such as implication, definition, concept, judgment, knowledge, ignorance, good and evil. Second: chapters on Judgments from Abdullah bin Masood Bukhari’s al-Tawdeeh li matn al-Tanqeeh and Tafzani’s commentary al-Talweeh. Third: Conflict and preference from Ibn Qudama’s Rawdat al-Nazir and its commentary Nuzhat al-Khatir.

## FIQH 615

### Meth. of deri. Legal Op.& Jud.

#### Credit Hours: 3

This course deals with the functional and purpose-oriented definition of Ijtihad its types, rulings, stages, terminological development. It further examines the issue of commitment to a particular school of thought or to schools other than the four known ones, the non-availability of a mujtahid, countering or changing ijihad, ways through which mistakes creep in this process, intermingling of various opinions. It also deals with the term ifta’, its pillars, conditions and etiquettes, anomalies in financial transactions.

## FIQH 620

### Analogy and Reasoning

#### Credit Hours: 3

The course covers the definition of Qiyas (Analogy), its definition, origin and authority, and the difference between juristic analogy and logical analogy, difference between the methodologies of jurists and theologians in deriving rulings through qiyas. Contents also include the pillars of analogy i.e. the original case and its conditions, the new case and its conditions and the effective cause, its types and conditions and lastly contemporary application of analogy and reasoning.

## FIQH 625

### Islamic Political System

#### Credit Hours: 3

Addresses basic issues of Islamic political system by defining important terms and works while stating its purpose, legitimacy, importance, rules, sources and its relation to the sources of legislation. Furthermore its various implications in creed, worship, the judiciary, economics, management, education etc. Comparison of the authorities of the executive, legislature and judiciary in man-made organizations, separation of religion and state, codification of the constitution, means of reform and dealing with corruption and lastly by studying empirical models of Islamic governance.

## FIQH 630

### Themes of Implications

#### Credit Hours: 3

This course deals with a comparison between the majority’s methodology and that of the Hanafis with relation to the study of words and their implied meanings through four aspects: ascribing a word for a certain sense (the general and particular and the common word), second: use of a word in a sense (plain speech, trope), third as the emergence of a certain sense and its absence (the apparent/hidden meaning, the text, etc.) and fourthly how a word denotes a certain sense (mafhum al-muwafaqah wal-mukhalafah etc.)

## FIQH 635

### Isla. Law of Inter. Relations

#### Credit Hours: 3

Introducing the concept of international relations, the state, relationship between Muslims and ‘others’, governance of non-Muslims in a Muslim state and the general principles underlying relationships in the state of peace in various fields. It further clarifies rights of dhimmis and Muslim minorities the general principles underlying relationships in a state of war, Jihad, suicide operations, spying, prisoners and wounded and their rights. It also looks at peace and treaties comparing them to other international laws and international organizations (e.g. UN).

## FIQH 640

### Res. Me. of Fiqh & Usul alFiqh

#### Credit Hours: 3

This course begins with an in-depth study of the general approaches to scientific research in general, and research methods in Islamic jurisprudence in particular and their characteristics such as creativity, originality etc. Moreover it teaches referencing, quoting from primary and secondary sources. It also teaches preparation of a synopsis, means of research in juristic sources understanding terms used by authors and observance of copyright information.

## FIQH 645

### New Issues of Islamic Worship

#### Credit Hours: 3

The course includes what constitutes ‘new issues’ and an introduction to the most important contemporary sources in this regard such as the modern encyclopedia of fiqh and decisions of fiqh councils etc. It then studies emerging issues in the domain of Islamic worship such as medication to regulate menstrual cycle, prayer timings, Zakat of stock shares, determining the birth of a new moon in Ramadan, modern techniques of circumambulation and other related issues.

## FIQH 650

### Isla. Law of Judici. & Evide.

#### Credit Hours: 3

This course starts with the concept and history of the Islamic law of judiciary and evidence, its difference with the judicial

system. It also deals with the conditions required for a judge, his appointment, etiquettes, integrity, independence, and means of his removal through resignation or otherwise. It also provides an overview of a case with respect to its types, legality, judgment, conditions and its study. It also studies means of evidencing, oath and its breach, Judicial verdict and other concerned issues.

## FIQH 655

### Isla. Penal Code & Cont. issu.

#### Credit Hours: 3

The concept of punishment and its implementation on the offender in Islamic jurisprudence; this is done through defining both crime and punishment and the general principles of Islamic criminal legislation. Contents include retribution for murder and other crimes, prevention of crimes and ways of dealing with criminals, in depth study of contemporary issues (intellectual property, international cross border offences, etc. how Islamic states deal with conflicting man-made laws), authority of legislature and international legal organizations such as International Criminal Court.

## FIQH 660

### Con. Issu. of Isla. Family Law

#### Credit Hours: 3

The course covers the study of Muslim family law in the Muslim countries in general and the West in particular, contemporary challenges, including modern forms of marriages like misyar, urfi and through phones and internet, medical examination prior to marriage, marriage of Muslims to non-Muslims, abortion, genetic engineering, birth control, semen banks, surrogate mothers etc. It also studies rights of women, children, the elderly between Islamic jurisprudence and international declarations, arbitration in western courts keeping the provisions of Qatari law in this regard.

## FIQH 665

### Islamic Banking Operations

#### Credit Hours: 3

Addresses the definition of Islamic banks, its basic principles, origins and evolution, the resources of Islamic banks and how the bank uses the capital; this is done through three areas: financial operations of individuals/companies (Murabaha etc.), investment operations (currency exchange etc.) and operation facilities (internet banking etc.) in each case focusing on their respective modes of financing. All three areas are studied theoretically and practically in accordance with the operational procedures of Islamic banks, with a comparison of both Islamic and non-Islamic operations.

## FIQH 670

### Fiqh of Money and Economics

#### Credit Hours: 3

This course provides an in-depth analysis of topics related to money and Islamic economics, comparing it to man-made economy in terms of the foundations, areas and ideological and ethical dimensions. Contents include the ability of Islamic economics to achieve economic development, solve economic problems such as poverty, and unemployment, various financial contracts such as usury, debt sale etc. and related issues such as bank cards, dealing with stocks and bonds, inflation, privatization, globalization of the economy and dealing with financial crises through an Islamic perspective.

## FIQH 675

### Textual Study of Fiqh

#### Credit Hours: 3

This course deals with the schools of Islamic jurisprudence and focuses on terminologies of jurists in the expression of their respective schools and their methodologies of understanding and developing their schools of thought, and the terms required for research in jurisprudence. It also studies various juristic issues in five commentaries of various schools of thought starting with the status of that commentary, its origin and identifying through application of the author's methodology and use of terms.

## FIQH 680

### Thesis

#### Credit Hours: 6

This course provides the student a wonderful opportunity to whet and polish their research as well as academic writing skills by making an in-depth study of a topic of their interest - yet one that would extend the frontiers of knowledge - with the assistance of their advisors/supervisors applying various methodologies related to the fields of social sciences, humanities and study of religious traditions. Thereafter it would be evaluated by a committee.

## FIQH 713

### Theory of knowledge

#### Credit Hours: 3

This course studies the Theory of Knowledge with all of its components, elements and different approaches. It examines the essence of knowledge, its nature, sources, limits, means and objectives. It also covers the various Western philosophical approaches to the subject of knowledge, in a comparative and critical manner, accompanied by the approaches presented by Muslim scholars in this field. Additionally, this course examines the Quranic approach in establishing the foundations for the theory of knowledge, and illustrates its features and limitations.

## FIQH 715:

### Conflict and preferring

#### Credit Hours: 3

This course deals with the issue of conflict and preference according to the scholars of Usual al-Fiqh and their different schools. It delves into the reasons for conflict that exists between the texts and legal analogies and its conditions, along with the conditions for harmonizing and preferring between the texts, analogies and reasons. It also studies the preferences that are a result of both internal and external matters and ways to balance between them when they conflict. Additionally, it includes an applied study of contemporary issues that involve conflict and preferring in both traditional and modern Fiqh.

## GENG 602

### Applied Research Methodology

#### Credit Hours: 3

This course will develop the research abilities of graduate students in Engineering. The goal of the course is to equip students with both qualitative and quantitative tools to conduct research. This is practical course designed to help graduate students arrive at a workable thesis plan, & a comprehensive knowledge of the resources available to them to pursue it. It covers the thesis as a type of writing, project planning, time management, research ethics, information retrieval, and professional skills.

## GENG 603

### Advanced Numerical Analysis

#### Credit Hours: 3

This course aims at understanding the construction and appropriate use of numerical algorithms that provide solutions to science and engineering problems. The following algorithms are studied; root finding, interpolation and approximation of functions, numerical differentiation and integration, numerical solutions of ordinary differential equations and boundary value problems. An emphasis will be given to understanding the accuracy, convergence, divergence, limit analysis, efficiency, and stability of various algorithms. The course will use some commercially available software such as MATLAB.

## GENG 604

### Project Management

#### Credit Hours: 3

Role of projects in organization's competitive strategy; standard methodologies for managing projects; project life cycle; design-implementation interface; estimating: preliminary and detailed; contractual risk allocation; scheduling: PBS; WBS; integration of scope, time, resource and cost dimensions of a project; evaluation of labor, material, equipment, and subcontract resources; scheduling techniques including CPM/ PERT, GERT, critical chain; solving real world project schedules; Monte Carlo simulation; cost budgeting; cost baseline; cash flow analysis; earned value analysis; cost control; proposal presentation; application of software for project management.

## GENG 605

### Applied Statistics Analysis

#### Credit Hours: 3

This applied course is designed for graduate students. The goals of the course are to develop the skills necessary to identify an appropriate technique, estimate models, and interpret results for independent research and to critically evaluate contemporary research using advanced quantitative methods. The focus of the course is on estimating models and interpreting the results, rather than understanding in detail the mathematics behind the techniques. The course will provide students with a solid foundation in advanced quantitative methods, which is in high demand in many fields. The course will include random distributions, error analysis, confidence levels, statistical analysis of reduced sample size and other important topics to help the students understand the importance of applying statistical techniques to their research findings.

## GENG 606

### Graduate Seminar

#### Credit Hours: 0

The course covers the art of writing research proposals and finding related materials as with libraries, web access, and other resources; discussion of delivery and presentation styles; techniques for writing scientific papers and technical reports. Graduate students are required to attend the seminars given by faculty, visiting scholars, and fellow graduate students. Additionally each student must present at least two seminar on a timely research topic. Among other things, this course is designed to give the student an overview of research in the department and professional societies in their discipline. Graded on a Pass or Fail basis.

## GENG 607

### Optimization Methods

#### Credit Hours: 3

This course introduces the principal algorithms for linear, discrete, nonlinear, dynamic optimization and optimal control. Emphasis is on methodology and the underlying mathematical structures. Topics include the simplex method, branch and bound and cutting plane methods for discrete optimization,



optimality conditions for nonlinear optimization, heuristic methods, and dynamic programming methods.

## **GULF 500**

### **Advanced Research Methodology**

#### **Credit Hours: 3**

This course provides advanced knowledge about conducting high-quality research. This includes providing a theoretical framework about the latest in research methods in social sciences and humanities. By providing an advanced knowledge for both quantitative and qualitative methods, the course will encourage and train students to develop their own research in accordance with the interdisciplinary demands of the degree. The course will focus on developing research skills in term of dealing with sources (books, journals, electronic sources).

## **GULF 510**

### **Contemporary History & Politics in the Gulf**

#### **Credit Hours: 3**

This course provides comprehensive knowledge about the contemporary history of the Gulf, starting at the end of the First World War, through to the emergence of the Modern State in the Gulf region. The course will focus on how political developments shaped the history of the region. It will focus on the history of Iran under the Pahlavi dynasty and the history under the Islamic Republic, the history of Iraq after the first world war, and the histories of each of the GCC states. The course will look at the dynamic of politics in each country, and at the relations within the region. In addition, the role of oil and external players will be an important part of the themes that this course will focus on.

## **GULF 511**

### **Politics of the Gulf**

#### **Credit Hours: 3**

The Gulf states political systems can be understood as having a unique character within the international system. This course seeks to examine the cotemporary political structures and drivers of change. Key issues such as the role and nature of civil society; elections; sociopolitical movements; and the

impact of the rentier economy on the politics in the Gulf are examined. Students will be equipped with a theoretical understanding of these core issues, which will be grounded from a historical perspective.

### **Prerequisite**

#### **GULF 691**

## **GULF 520**

### **State and Society in the Gulf**

#### **Credit Hours: 3**

This gateway course to the program provides students with an introduction to the scholarly work concerning society, social change, and the state in Arabia. While the course includes substantial historical material, the focus remains fixed on the contemporary era. The survey of the literature will move beyond the generalities of globalization theory to examine and explore rentier state theory, tribalism and post?tribalism, nationalism and citizenship, the shifting gender dynamics of contemporary Arabia, and the identity politics often subsumed in the tradition/modernity dichotomy. Students should expect to prepare a substantial paper based on original research.

## **GULF 521**

### **City and Society in the Gulf**

#### **Credit Hours: 3**

In the span of a few decades, the states of the Arabian Peninsula have emerged as some of the most urbanized in the world. This course presents an interdisciplinary approach to the study of city and society in the Gulf States. The course begins with selections from the substantial classic literature concerned with the Middle Eastern City, a literature which provides a starting point from which the development of the Gulf City can be compared and contrasted. From that starting point, students will examine the political, economic, and social forces that have driven the rapid growth of the Gulf City; the social problems, both those of a universal nature and those unique to Arabia, that accompany that rapid urbanization; the role of master-planning and the state in this urban growth; the architectural literature concerned with supermodernism and the urban form; and the analyses of the role of migrant populations in establishing a basic spatial discourse for the

Gulf City. Students should expect to conduct original research and prepare a substantial term paper for this course.

## **GULF 523**

### **Human Rights & the Gulf State**

#### **Credit Hours: 3**

This course provides students with a comprehensive understanding of the current discourse on human rights and the role it plays in shaping the relationship between states and citizens. The course begins by examining the religious and philosophical texts that predated the articulation of human rights in the modern era, including texts of both western European and Middle Eastern pedigree. Students then explore the historical articulation and ongoing extrapolation of a set of universal human rights through a set of overarching topical areas of inquiry, including one focused on labor, migration and human trafficking in the Gulf States; another on political rights and civil society in the GCC; a third area of inquiry focused on gender and human rights in Arabia; and a final area of inquiry examining media, freedom of expression, and censorship. Students will also explore the arguments of scholars who counter the individualistic and western notion of human rights by highlighting cultural rights in the increasingly globalized era. Students will conduct original research and prepare a substantial term paper for this course.

### **Prerequisite**

#### **GULF 692**

## **GULF 524**

### **The Arab. Peni. Lite. & Cult.**

#### **Credit Hours: 3**

This course is primarily a comprehensive introduction to literature and culture of the Arabian Peninsula and the Gulf countries and will survey key texts, focusing on modern literature and contemporary technology writing. The course will address how authors have rewritten and overturned, through resistance or ambivalence, the classical Arabic tradition. It will examine the different types of opposition, conflict and limits reproduced in the articulation of modernity, demonstrating how cultural politics regulates and/or suppresses the construction of identity and self-expression. Special attention will be given to the rise of the novel in the

Arabian Peninsula and will show how modern narratives have been influenced and marked by questions of canon formation, globalization and social change. The readings will include modern novels, short stories, poems, electronic writing and critical texts.

## **GULF 530**

### **International Relations of the Gulf**

#### **Credit Hours: 3**

This course provides an advanced and comprehensive understanding of the contemporary international relations of the Gulf region since 1971 when Britain ended its protectorate relationship with the smaller states of the lower Gulf. The course begins with key contextual events being analyzed which include the oil embargo of 1973?74; the Iranian Revolution; the Iran?Iraq War; the emergence and functioning of the GCC; the Gulf War of 1990?91; and the American?led invasion of Iraq in 2003. The nature of the Arab Gulf states foreign policies is also encompassed in addition to the broader contextual issues that shape its development which includes a range of issues such as interstate cultural identity, security challenges, the political economy of the global oil market, and also an analysis of the nature and drivers of U.S. foreign policy towards the Gulf region since 1971 with particular regard to Gulf security. The course concludes by examining emerging security challenges to the immediate and broader Gulf region.

## **GULF 531**

### **Political Economy of the Gulf**

#### **Credit Hours: 3**

This course focuses on the study of international political economy by examining its conceptual foundations and empirical applications within the Gulf region. The course first provides a comprehensive approach to the study of political economy by introducing the main theoretical perspectives in the field. The course pays attention to the traditional political economies of the Gulf and the impact of the discovery of oil and the transformation of their economies to rentier states. The impact of the rentier economic system is examined in detail by looking at the economic structure in addition to its effect on political participation and the labour market. Case studies will then be adopted whereby the political economies of Saudi Arabia, Dubai, Qatar and in addition to the other Gulf States are examined. Issues of direct relevance such as the political economy of regional integration in the Gulf will be examined, in addition to the role of Gulf sovereign wealth funds. This will be

built on through an examination of the how the GCC states are impacting the global economy in terms of oil, gas, Finance and Trade. The course will conclude with an examination of the challenges of economic reform in the GCC states.

## **GULF 532**

### **Security of the Gulf States**

#### **Credit Hours: 3**

The study of international security has evolved since the end of the Cold War as the concept of war, the threat to use force and defence is no longer considered exclusively part of the security equation. This course addresses the range of global dangers that threaten the modern state in the Gulf, which range from pandemics and environmental degradation to the more traditional security concerns of nuclear proliferation and direct violence, such as terrorism and inter-state armed conflict. This course provides an advanced theoretical approach to the field of security studies and examines multifaceted aspects in addition to applying this to the traditional and non-traditional issues that have emerged on the security policy agenda such as threats of piracy in the Horn of Africa. This course seeks to use various case studies on a global basis to underline the various challenges which exist in the contemporary system and how there are relevant to the Gulf region.

#### **Prerequisite**

## **GULF 694**

## **GULF 533**

### **Global Energy Geopolitics**

#### **Credit Hours: 3**

This course examines the political economy of the global energy industry and its economic relationship to international markets. The key themes that this course seeks to address include the multifaceted interaction between economics and the politics of energy markets; the challenges of managing energy policy and security; in addition to questions of sustainable energy development. The course offers a global perspective of energy geopolitics and begins with an introduction to the fundamentals of energy production, transportation, consumption, and the functioning of the global energy markets and its industry. Emphasis will be initially

given to the oil industry but the role of natural gas is also addressed. An additional feature of this course will be to offer students an in-depth understanding of the major countries, regions, institutions, political, and economic character of the contemporary world energy market.

## **GULF 540**

### **Envi. & Climate Ecology**

#### **Credit Hours: 3**

This course focuses the impact of climate change on the Arabian Gulf States. The themes include environmental challenges and developments that are newly emergent, such as desertification, biodiversity loss, urbanization, marine and coastal pollution, carbon dioxide pollution, limited water resources, and rising sea levels. Therefore, the course presents themes for inquiry that support an interdisciplinary study from social science dimensions. Study will be within environmental studies and climate ecology, and informed by analysis around energy, security, political economy and development. The course investigates not only the impact but inter-relationship between these sources of environmental change and development. It guides students to consider means for human responsabilization and enables students to conceptualize solutions and various policy recommendations from a grounded and broad study of the various dynamics affecting climate in the Gulf.

## **GULF 550**

### **Med.& Inf.Comm.Tech.in the GCC**

#### **Credit Hours: 3**

The information technology revolution is considered one of the major events in the twentieth century. This is due to the fact that media is indeed influencing every society in today's world. It also shapes images and dynamics in those societies. This course will provide a comprehensive background about the history of this media revolution, with particular focus on media and Information Communication Technology in the GCC in the Gulf reign. The course will look at the emerging impact of media and Information Communication Technology in the GCC, especially with the increasing use of media sources such as TV satellites, Internet, mobile phone, and radios. The social, economical and political impact of the media and Information Communication Technology in the GCC sources will be covered in this course.

## **GULF 560**

### **Special Topics 1**

#### **Credit Hours: 3**

The course on special areas in the social sciences and humanities will be offered depending on student interest and faculty specializations. This course offers the opportunity to explore in more depth topics within politics, the economy and society as relate to geographical areas in the Gulf region, Iran or Iraq and/or thematic areas. Thematic areas may, for example, include gender studies, educational and economic reform, human development, civil society, socio-economic participation, public policy, regional and international relations, labour migration, identity and globalization.

## **GULF 561**

### **Special Topics 2**

#### **Credit Hours: 3**

The course on special areas in the social sciences and humanities will be offered depending on student interest and faculty specializations. This course offers the opportunity to explore in more depth topics within politics, the economy and society as relate to geographical areas in the Gulf region, Iran or Iraq and/or thematic areas.

## **GULF 600**

### **Conceptual and Theoretical Approaches to Gulf Studies**

#### **Credit Hours: 3**

The course in intended to study the conceptual and theoretical frameworks related to social, political and economic aspects of the Gulf region. The central objective is to provide the students with the necessary tools to conduct analysis and evaluation on the intellectual framework within the field of Gulf studies.

## **GULF 601**

### **Quantitative Research Methods in the Social Sciences**

#### **Credit Hours: 3**

This course is intended as a critical appreciation of different quantitative research methods as used in the social sciences. Focus is given on design, application, analysis and evaluation of data is covered in the course. Attention is also given on the application of quantitative modeling procedures to data.

## **GULF 602**

### **Qualitative Research Methods in the Social Sciences**

#### **Credit Hours: 3**

This course is intended as a review of different qualitative research methods as used in the social sciences. Focus is given on design, application, analysis and evaluation of data is covered in the course. Attention is also given on the application of computer programing modelling procedures to analyzing data.to data.

## **GULF 611**

### **Foreign Policy Analysis of the Gulf States**

#### **Credit Hours: 3**

This course provides an in-depth theoretical and empirical analysis of the foreign policies of the Gulf States. The course begins with a theoretical and conceptual analysis, focusing mainly on foreign policy analysis and International Relations theories. Following this analysis, it explores the foreign polices of all Gulf states including Iran, Iraq and Yemen. In addition, it provides critical analysis of the relations between the Gulf and other regions such as Europe, the US, Latin America, Africa, and Asia. The course aims to combine both theoretical and empirical analysis of each individual state in the Gulf and its external behavior.

## **GULF 612**

### **Culture & SACCociety in the Gulf**

#### **Credit Hours: 3**

This course provides an in-depth analysis of culture and society of the Gulf. It begins with a detailed theoretical and conceptual analysis related to culture and society. The course will explore diversity, complexity, and dynamism of social life and culture in 'the region'. It shall discuss a range of social forms and identities constructed, de-constructed, consumed, contested,

and reconstructed by and about the peoples of the Gulf. In addition, tribalism from a cultural perspective will be analyzed and examined to understand the relationship between different segments of the state and society. In addition, the course will provide analysis of the history of the intellectual role in the early socio-political transformation; cultural organization, social and political affiliation.

#### **GULF 614**

##### **Contemporary Issues in Gulf Studies**

**Credit Hours: 3**

The course offers an interdisciplinary and multidisciplinary study to the contemporary issues in Gulf studies. The course will allow students to explore the contemporary issues in the Gulf studies within the social science conceptual frameworks and analytical analysis. It will cover different disciplines and several topics within a single course. The course will allow students to develop their interest and preference for further specialization in Gulf studies. In particular, it will analyze the historical, political, economic and social evolutions of the Gulf States and the trends in Gulf studies.

#### **GULF 615**

##### **Energy and Natural Resources in the Gulf**

**Credit Hours: 3**

The purpose of this course is to provide exposure to students to the interplay of energy and resources along with the most pressing economic issues confronting the Gulf sub-region in the contemporary period. The course will focus on energy and renewables, petroleum, mining and natural resources. The changes and challenges in the economic climate of these countries will be analyzed and interpreted in view of the challenges posed by the development of other energy and natural resources in other regions and the competition thereof to the Gulf states. The course will be taught with an interdisciplinary emphasis by considering historical, political, social and cultural aspects

#### **GULF 623**

##### **Human Rights and the Gulf States**

**Credit Hours: 3**

The course seeks to unpack the interplay of human rights in the international and domestic politics of Gulf countries. It examines the interplay of the theory and practice of human rights in this region. It explores the philosophical foundations of human rights, accounting for multidisciplinary approaches. One aim is to critically assess them by revisit Universalist, particularist, and relativist perspectives. A second aim is to equip students with the conceptual and methodological skills for study of the development of human rights norms, and their application in the region.

#### **GULF 624**

##### **Women and Gender Issues in the Gulf**

**Credit Hours: 3**

This course explores and highlights the main issues of women and gender in the Gulf and wider Middle Eastern society from an interdisciplinary perspective. The course will focus on the following topics; Arab women in orientalism and colonial legacies, place of women in traditions and religion, women and economy, women and political participation, impact of colonization over changing perception of women in Arab societies, feminism in the Gulf, and role of women in a patriarchal societies in the Gulf. In particular, it will explore the development of women and gender issues in the region since the formations of the Gulf States.

#### **GULF 625**

##### **Youth Issues in the Gulf**

**Credit Hours: 3**

The course will offer an innovative approach to the study of youth issues in the Gulf from an interdisciplinary perspective. It will apply social science in theoretical and conceptual frameworks in studying youth in the Gulf. It will map out youth and their demographic growth through the population boom in the 1970s and 1980s. It will study youth complex social and political attitude, youth leaderships and their various strategies for development. The course will also consider how young people in the Gulf contend socially and culturally speaking with competing imperatives from globalization, Westernization and the desire to preserve traditional culture and values. It will consider the cultural, socio-economic and political issues that affect the youth in the Gulf and the reasons for success and radicalization.

#### **GULF 629**

##### **Special Topics I**

**Credit Hours: 3**

This course covers special topics in the Social Sciences and Humanities area and will be offered depending on student interest and faculty specializations. This course offers the opportunity to explore in more depth topics from a variety of thematic areas.

#### **GULF 633**

##### **Global Energy Geopolitics**

**Credit Hours: 3**

This course examines the political economy of the global energy industry and its economic relationship to international markets. The key themes that this course seeks to address include the multifaceted interaction between economics and the politics of energy markets; the challenges of managing energy policy and security; in addition to questions of sustainable energy development. The course offers a global perspective of energy geopolitics and begins with an introduction to the fundamentals of energy production, transportation, consumption, and the functioning of the global energy markets and its industry. Emphasis will

be initially given to the oil industry but the role of natural gas is also addressed. An additional feature of this course will be to offer students an in-depth understanding of the major countries, regions, institutions, political, and economic character of the contemporary world energy market.

#### **GULF 634**

##### **Food and Water Security in the GCC and Middle East**

**Credit Hours: 3**

The course will tackle the chronic issue of food and water security in the GCC and the Middle East. It will explore the nexus of water and food security in the GCC and the Middle East within the global water and food shortages. The course will offer a study of the history of water and food regimes, the strategic significance of water and food provision and different forms of water polices and land tenure since the 19th century and how they have affected security. Further, it will analyze the contemporary food security challenges and relate them to broader economic development in general and water and

energy issues in particular. The course will provide knowledge of organizations and institutions that play a crucial role in the world of water and food politics and consider GCC States policies in ensuring water and food.

#### **GULF 635**

##### **GCC Economic Development and Diversification**

**Credit Hours: 3**

The course will offer a conceptual and analytical examination and analysis of the GCC states' economic development and diversification. The course begins with a detailed analysis of theories of development. It will provide an understanding for the urgent need for economic development and diversification because of the overdependence on the finite energy resources to propel their economic development. It will examine GCC states policies and strategies in pursuing their path for economic development and diversification. The course will critically analyze the GCC states development model, path dependency and evaluate their diversification strategies. The role of government, private sector and society will be fully examined and it will consider the industrialization efforts as well as the policies of the development of human capital and knowledge economy.

#### **GULF 639**

##### **Special Topics II**

**Credit Hours: 3**

This course covers special topics in the Energy and Economics areas and will be offered depending on student interest and faculty specializations. This course offers the opportunity to explore in more depth topics from a variety of thematic areas.

#### **GULF 643**

##### **Political Islam**

**Credit Hours: 3**

This course focuses on the study of political Islam in the Gulf. It will examine contemporary political thought of Islamist movements in the region and the historical context and conditions in which these movements have emerged. Political Islam course combines historical and socio-political enquiry



with analysis of (changing) political paradigms that have been associated with the rise of Islamism as from the turn of the 20th century. Academic (and political) approaches and contending understandings of the phenomenon of political Islam will be examined including perceiving Islamism as a merely spiritual/salvational momentum, social-movement-theory groups, politically-pragmatic parties, or apocalyptic and/or terror-inspired associations - driven by a blend of internal and external factors.

#### **GULF 644**

##### **Politics and Society of Iran**

##### **Credit Hours: 3**

This course focuses on the characteristics and evolution of the Iranian society and politics, as well as the international behavior of Modern Iran, mainly since the Islamic Revolution in 1979. The course aims to explain the traditional and modern elements of the Iranian society that made the Islamic Revolution possible. It will also explain the internal and international impact of the revolution, as well as the operation of diverse religious and political personalities and factions in the intra-elite power struggle throughout republican history. Special attention will be given to the institutional and factional framework, with particular focus on the electoral.

#### **GULF 645**

##### **The Gulf and Global Powers**

##### **Credit Hours: 3**

This course provides an advanced and comprehensive understanding of the foreign relations of the Global power and the Gulf region. The course begins with an in-depth theoretical and conceptual analysis, focusing mainly on foreign policy analysis and International Relations theories. Following this analysis, it explores the relations between the Gulf and Global Powers from the Cold War era, and continues up to the current period. It will examine the main institutions, agency and actors which influence the bilateral relations and will particularly provide in-depth analysis on US, EU, China, Russia, India and as well as other raising global powers like the BRICS and other Asian countries relations with the GCC states as well as Iran and Iraq.

#### **GULF 646**

##### **Governance and Globalization in the Gulf**

##### **Credit Hours: 3**

The course provides an advanced introduction to the field of globalization and governance and its relevance to the Gulf. The course will critically review and evaluate contemporary international relations and the international political economy conceptual debates on this topic. The course will examine the complexity of the global political and economic system and how power and equity are distributed and will consider how the Gulf States are situated within the system. Globalization and global governance will be related to regional, national and local governance and the impact on particular actors, including governments; industry; civil society groups will be examined. The course will also examine and explore the development of the governance and institutions in the Gulf. In particular, it seeks to help students to understand the role of electoral processes, political reform and political participation, governmental institutions, civil society institutions, good governance.

#### **GULF 649**

##### **Special Topics III**

##### **Credit Hours: 3**

This course covers special topics in the Politics and International Relations areas and will be offered depending on student interest and faculty specializations. This course offers the opportunity to explore in more depth topics from a variety of thematic areas.

#### **GULF 695**

##### **Thesis**

##### **Credit Hours: 3 to 6**

The thesis is a required piece of work that demonstrates students' own research interests. The length of the thesis will be between 60-70 pages, not counting the endnotes and bibliography. Students can develop their thesis topic based on seminar work and in consultation with the academic advisor or with faculty member. Students are encouraged to begin thinking of the thesis around the end of the second semester (preferably after completing 18 credit hours of course work). At the beginning of the third semester, students should start writing a proposal, choose an advisor, and form a committee. The committee consists of the advisor and two faculty

members who will read and evaluate the thesis. There will be an oral defence scheduled after the submission of the thesis.

#### **GULF 890**

##### **Dissertation**

##### **Credit Hours: 0 to 30**

The creation and interpretation of new knowledge, through original research or other advanced scholarship, of a quality to satisfy peer review, extend the forefront of the discipline, and merit publication.

#### **GULF 690**

##### **Doctoral Thesis**

##### **Credit Hours: 0 TO 30**

The creation and interpretation of new knowledge, through original research or other advanced scholarship, of a quality to satisfy peer review, extend the forefront of the discipline, and merit publication.

#### **GULF 691**

##### **Contemporary History & Politics in the Gulf**

##### **Credit Hours: 3**

This course provides comprehensive knowledge about the contemporary history of the Gulf, starting at the end of the First World War, through to the emergence of the Modern State in the Gulf region. The course will focus on how political developments shaped the history of the region. It will focus on the history of Iran under the Pahlavi dynasty and the history under the Islamic Republic, the history of Iraq after the first world war, and the histories of each of the GCC states. The course will look at the dynamic of politics in each country, and at the relations within the region. In addition, the role of oil and external players will be an important part of the themes that this course will focus on.

#### **GULF 692**

##### **State and Society in the Gulf**

##### **Credit Hours: 3**

This gateway course to the program provides students with an introduction to the scholarly work concerning society, social change, and the state in Arabia. While the course includes substantial historical material, the focus remains fixed on the contemporary era. The survey of the literature will move beyond the generalities of globalization theory to examine and explore rentier state theory, tribalism and post-tribalism, nationalism and citizenship, the shifting gender dynamics of contemporary Arabia, and the identity politics often subsumed in the tradition/modernity dichotomy. Students should expect to prepare a substantial paper based on original research.

#### **GULF 693**

##### **Political Economy of the Gulf**

##### **Credit Hours: 3**

This course focuses on the study of international political economy by examining its conceptual foundations and empirical applications within the Gulf region. The course first provides a comprehensive approach to the study of political economy by introducing the main theoretical perspectives in the field. The course pays attention to the traditional political economies of the Gulf and the impact of the discovery of oil and the transformation of their economies to rentier states. The impact of the rentier economic system is examined in detail by looking at the economic structure in addition to its effect on political participation and the labour market. Case studies will then be adopted whereby the political economies of Saudi Arabia, Dubai, Qatar and in addition to the other Gulf States are examined. Issues of direct relevance such as the political economy of regional integration in the Gulf will be examined, in addition to the role of Gulf sovereign wealth funds. This will be built on through an examination of the how the GCC states are impacting the global economy in terms of oil, gas, Finance and Trade. The course will conclude with an examination of the challenges of economic reform in the GCC states.

#### **GULF 694**

##### **Inte. Relations of the Gulf**

##### **Credit Hours: 3**

This course provides an advanced and comprehensive understanding of the contemporary international relations of the Gulf region since 1971 when Britain ended its protectorate relationship with the smaller states of the lower Gulf. The course begins with key contextual events being analyzed which

include the oil embargo of 1973?74; the Iranian Revolution; the Iran? Iraq War; the emergence and functioning of the GCC; the Gulf War of 1990?91; and the American?led invasion of Iraq in 2003. The nature of the Arab Gulf states foreign policies is also encompassed in addition to the broader contextual issues that shape its development which includes a range of issues such as interstate cultural identity, security challenges, the political economy of the global oil market, and also an analysis of the nature and drivers of U.S. foreign policy towards the Gulf region since 1971 with particular regard to Gulf security. The course concludes by examining emerging security challenges to the immediate and broader Gulf region.

## **IENG 554**

### **Decision Techniques and Data Analysis**

#### **Credit Hours: 3**

This course discusses modeling techniques and analytical decision tools that can be used in managerial decision-making. It will focus on building models that are simplified representations of the decision-making environment. Such models will allow for the generation of various scenarios, perform what-if analysis, find optimal business solutions, and, in general, learn more about a problematic situation. They can involve multiple business functions, including operations, finance, and marketing.

## **IENG 554**

### **Decision Techniques and Data Analysis**

#### **Credit Hours: 3**

This course will discuss modeling techniques and analytical decision tools that can be used in managerial decision-making. Whether in not-for-profit organizations or in the for-profit business world, stakes are high and mistakes are costly. Rather than relying solely on intuition, managers should consider all available information to accurately characterize their strengths, assess the competition, and forecast the future behavior of the market before making a decision. Moreover, in a complex and dynamic environment, it may not even be possible to grasp the full situation intuitively, and trying to learn by experience may be fatal to the organization. In this course, we will focus on building models that are simplified representations of the decision-making environment. Such models will allow us to generate various scenarios, perform what-if analysis, find optimal business solutions, and, in general, learn more about a problematic situation. They can

involve multiple business functions, including operations, finance, and marketing.

## **IENG 556**

### **Supply Chain and logistics**

#### **Credit Hours: 3**

This course provides an overview of supply chain management. It starts with the vitality of effective supply chain management in today's competitive and globalized economies. Then it presents a review of demand forecasting and inventory management and links these with supply chain management. Building on this, the course covers supply chain coordination. It sets the rationale for coordination, presents the challenges against coordination, and discusses the mechanisms for coordination and, furthermore, building strategic alliances. The course also talks about designing a supply chain with an emphasis on synchronization of procurement, inventory, and production. The course demonstrates how information technologies should be coupled with business processes and how effective sharing of information between supply chain partners can improve the supply chain performance.

## **IENG 557**

### **Systems Analysis and Design**

#### **Credit Hours: 3**

This course covers systems process, systems lifecycle, new techniques in systems lifecycle design, Fundamentals of systems analysis, systems preliminary investigation, systems cost benefit analysis, Data flow diagrams, Data dictionary, process description, Data models and data warehouse concepts, Design principles and computer interface design, Design principles and input design, design principles and output design, System hardware and software selection, implementation and quality assurance of system.

## **IENG 558**

### **Robotics & Automation Technology**

#### **Credit Hours: 3**

## **IENG 651**

### **Advanced Special Topics I**

#### **Credit Hours: 3**

Selected topics from specialized areas of engineering management or a related discipline aimed at broadening or deepening the student's knowledge and skills in the preparation of her/his dissertation. The specific contents of the course are published one semester in advance.

## **IENG 652**

### **Advanced Special Topics II**

#### **Credit Hours: 3**

Additional selected topics from specialized areas of engineering management or a related discipline aimed at broadening or deepening the student's knowledge and skills in the preparation of her/his dissertation. The specific contents of the course are published one semester in advance.

## **IENG 757**

### **Supply Chain and Logistics**

#### **Credit Hours: 3**

The course provides vitality of effective supply chain management and logistics in today's competitive and globalized economies. The course focuses on demand forecasting, transportation, procurement, retailing, and inventory management. Building on this, the course also covers supply chain centralized and decentralized coordination. The course also emphasizes on synchronization of procurement, inventory, and production. The course demonstrates how information technologies should be coupled with business processes and how effective sharing of information between supply chain partners can improve the supply chain performance.

## **IENG 758**

### **Robotics and Automation Technology**

#### **Credit Hours: 3**

This course introduces the basic principles of automated systems design and robotic automation. The course will focus on the design of robotics and automation technology for different applications in manufacturing and service systems.

## **IENG 751**

### **Advanced Special Topics I**

#### **Credit Hours: 3**

The content of these first special topics varies to cover emerging advanced theoretical and practical issues in Industrial and System Engineering.

## **IENG 899**

### **PhD Thesis**

#### **Credit Hours: 0 TO 48**

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.

## **ISLA 600**

### **Analytical Exegeses**

#### **Credit Hours: 3**

Providing the students with a good grasp of the principles of interpretation of the Quran and its sciences with particular focus on the definition and types of interpretation, analysis of the scientific verses of the Quran and those that serve the individual, society and the state. These verses include those related to beliefs, narrations and legislation and the method of inference from them. The course also includes introducing the main works of tafseer so that the student grasps its theoretical aspect.

## ISLA 601

### Qur’anic Sciences

#### Credit Hours: 3

This course links past studies of Quranic sciences with the present ones by focusing on the principles and methodological issues upon which Quranic studies are based. Issues to be discussed include: documenting the Quranic text through the following terms: revelation, revelation of the Qur’an, its compilation, its seven characters and readings, sitz em leben, the use of plain speech, metaphors, linguistic connotations and their impact on its interpretation and issues such as its parables and narratives and western studies on it.

## ISLA 602

### Inimitability of al Qur’an

#### Credit Hours: 3

Deepening the students’ understanding of studies regarding the inimitability of the Qur’an with regard to its relation to faith and its relation to its linguistic magnificence, and rhetorical beauty. A number of related issues also include examining evidences regarding its divine origin, uniqueness, structural continuity and continuity, eloquence, authentication of prophethood and their impact on demonstrating Quranic inimitability. All this would be based on the works of leading linguistics and exegetes.

## ISLA 603

### The Qur’an & Con. Hermeneutics

#### Credit Hours: 3

Reviewing the various developments in the field of modern and contemporary studies by comparing scientific theories dealing with the methodologies of the study of the Quranic text in different cultures. The course offers studies of various theories, such as the reader-response theory, structuralism and post-structuralism (death of the author), semiotic and stylistic, inter-textuality, feminist theory of interpretation...etc....The course also directs students to represent ancient theories in analyzing the Quranic discourse and introducing them to the proponents of contemporary readings of the Quran.

## ISLA 604

### Princ. of Qur’anic Exegeses

#### Credit Hours: 3

This course seeks to inculcate an in-depth study of the interpretation of the Koran based on linguistic and juristic principles. Principles of Quranic exegesis are studied with particular concentration on connotations of words during the revelation of the Qur’an, the importance of language and implications in the understanding of the Quranic text, sources of Quranic exegesis and the sciences and the prerequisites needed to interpret the Qur’an.

## ISLA 605

### Res. Method. in Quran. Studies

#### Credit Hours: 3

This course aims at preparing students for applying their knowledge base of research and investigative skills in Quranic studies and further enriching them on research methodologies and the academic and ethical nature of research. It will focus on training the researchers to think on visualizing and writing their future research proposal and further improve their writing skills, referencing and methodological steps required while working on their research. It also trains the students and researchers on reading ancient Arabic manuscripts of classical Qur’anic studies.

## ISLA 606

### Text. Stud.in Books of Tafseer

#### Credit Hours: 3

This course seeks to enable students to encounter classical books of Quranic exegesis and discover their characteristics and mutual differences and the efforts of Quranic exegetes and their methodologies. The course seeks to entrench the principles of analyzing the Quranic text and apply them on various Quranic exegeses. This would provide them a rich linguistic, juristic and creedal data from multiple sources which can then be subjected to scientific exegetical approaches.

## ISLA 607

### Qur’anic Rhetorics

#### Credit Hours: 3

This course aims at discussing the relationship between language and rhetorics in the Qur’an, the secrets of the Quran in the formulation of the word, sentences, and its link to the characteristics of rhetorical methods of the Qur’an. Contents include the Quranic linguistic and its comparison with pre-Islamic poetry and Arab syntax, the definition of style: rhetorical and scientific, the difference between them, the Quranic words, their choice and inherent splendour, Quranic idiom, the aptness and richness of Quranic connotations.

## ISLA 608

### Mod. Trends of Quran. Exegeses

#### Credit Hours: 3

Provides background for a scientific study of modern trends of Quranic exegesis and the most important schools to enable the student to familiarize with modern thought beginning from Mohammed Abduh, to Rashid Rida’s book al-Manar which pioneered modern exegetical movement in the Muslim world down to for Taher Ben Aashoor’s al-Tahrir wal-Tanweer. Contents include: features of modern trends of exegesis, methodologies of Mohammed Abduh and Rashid Rida and their comparison and lastly the contribution of their students such as al-Maraghi, al-Shaltout.

## ISLA 609

### Ranks of Quranic Exegetes

#### Credit Hours: 3

This course studies the levels of Quranic exegetes, their cultural and intellectual and the problems that emerged through their varying levels. It starts with the sahabah to the sixth level of exegetes. It further addresses the first interpreter of the Qur’an, i.e. Prophet Muhammad peace be upon him, then the various rank of interpreters from among the companions and the Tabi’un and their representatives, their differences and lastly the era of compilation represented by Ibn Abi Hatim, Ibn Jarir and others.

## ISLA 610

### Sci. of Divine Laws in Nature

#### Credit Hours: 3

Enabling the student to get an understanding of the disciplines required for the divine - cosmic laws mentioned in the Quran; several verses of the Quran can only be thus explained. This started in the last century with Mohamed Abduh and his disciples and has developed into an independent discipline since. Contents include: God’s cosmic laws humanity, human civilizations: their rise and fall, the law of cause-effect and issues related to predestination and divine cosmic laws.

## ISLA 611

### Int. to the Object. of alQuran

#### Credit Hours: 3

Gaining knowledge of objectives of the Quran and its overall purpose i.e. to be voluntary servants of God. The course also discusses the ultimate purpose of this religion, how the Quran is the greatest miracle of God and how it demonstrates the veracity of our Prophet Muhammad, peace be upon him. It also includes the relationship between the objective of the Quran and the sharia, the need to know these purposes, their types according to Rashid Rida and Tahar Ben Aashoor and comparison.

## ISLA 612

### Sc. Res. to Sk. about Noble Q.

#### Credit Hours: 3

This course responds to suspicions regarding the Quran, whether of old or contemporary, and aims at demonstrating that the Quran is really the word of the wise God and therefore does not contain errors. It also instructs the student to use the scientific method in responding to suspicions. The syllabus includes doubts regarding verification of the Quran, Meccan and Madinan surahs, its stories, the unseen world and the language, eloquence and legislation of the Quran



## **ISLA 690**

### **Thesis**

#### **Credit Hours: 6**

This course provides the student a wonderful opportunity to whet and polish their research as well as academic writing skills by making an in-depth study of a topic of their interest - yet one that would extend the frontiers of knowledge - with the assistance of their advisors/supervisors applying various methodologies related to the fields of social sciences, humanities and study of religious traditions. Thereafter it would be evaluated by a committee.

## **MAGT 101**

### **Principles of Management**

#### **Credit Hours: 3**

This course focuses on the fundamental concepts of management including its characteristics, evolution and importance. Topics include the functions performed by managers, such as planning, organizing, directing and controlling. Current issues facing managers will also be discussed to provide students with the necessary skills they can build upon to succeed as future managers.

## **MAGT 304**

### **Production and Operations Management**

#### **Credit Hours: 3**

This course focuses on the production function in industrial organizations. Topics covered include various techniques utilized in decision making, production systems, and activities related to the design of systems, product design, demand forecast and corporative and tactical production planning as well as production and quality control.

## **MAGT 307**

### **Internship in Business**

#### **Credit Hours: 3**

This course focuses on business internships that add a significant real-world component to students' education. It provides the opportunity for students to earn academic credit while gaining valuable work experience under the mentorship of a business professional in different industry sectors, i.e., services and manufacturing. An individualized assignment arranged with students and different business organizations providing guided experience in their field will be given. [Students' internship experiences are assessed via a written internship report that will be evaluated by the students' organization supervisor and an assigned faculty member.

## **MAGT 405**

### **Strategic Management**

#### **Credit Hours: 3**

This course focuses on developing a corporate vision towards the integration of various organization functions by taking into account the organization's internal and external environments. It also tries to comprehend the strategic standing of the organization and proceed with strategic evaluation and implementation. Topics covered include environmental scanning, strategy formulation, strategy implementation and control, and other strategic issues.

## **MAGT 501**

### **Introduction to Management**

#### **Credit Hours: 3**

This course covers the definition of management, its characteristics, evolution and importance, as well as the functions performed by managers-planning, organizing, directing and controlling. The course also intends to show students the applications of the management functions in various enterprises such as marketing, finance, personnel, production, etc.

## **MAGT 602**

### **Human Resources Mgmt**

#### **Credit Hours: 3**

This course aims at exploring key issues related to the management, performance, and development of human

resources in the workplace. It places special emphasis on making decisions and developing plans that enable managers to make the best possible use of their human resources, and covers areas such as: manpower planning, analysis and evaluation, recruitment and selection, wages and salaries, training and management development, performance appraisal, and al relations

## **MAGT 603**

### **Operations Management**

#### **Credit Hours: 3**

This course helps students to understand how to manage the conversion process, whether with goods, services or systems. It is also intended to broaden the scope of students' knowledge relating to the application of decision-making techniques to production problems with special emphasis on production control, operation system design, quality, operational strategy, relationship of production to other functions within the organization, and characteristics of the effective production/operations manager.

## **MAGT 604**

### **Management of Change and Innovation**

#### **Credit Hours: 3**

The primary focus of this course is to discuss and analyze case studies related to the Qatari and international sport environment. The course will look at different actors of the industry such as teams, players, leagues, federations, events, managers, sponsors, equipment makers etc. Topics may include building loyalty or value co-recreation in sports, , sport tourism marketing, sport celebrity endorsements, sport brand equity / sport brand development, cultural perspectives in sport marketing, Corporate social responsibility and ethics in sport organizations, sports marketing in professional leagues and the Olympics.

## **MAGT 605**

### **Project Management**

#### **Credit Hours: 3**

This course will present project management concepts and techniques. Specific topics related to project management such as scope management, time management, cost management, quality management, human resource management, communication management, risk management, procurement management, and the roles and responsibilities of project managers will be discussed. Students will utilize current tools and software related to projects to enhance their teamwork skills by creating and documenting a complete business project.

## **MAGT 607**

### **International Business Mgmt**

#### **Credit Hours: 3**

This course examines the theories that explain the need for international business in both international trade and direct investment. It also covers the complex environmental factors (political/legal, cultural, social, economic/ financial) that affect the activities of multinational companies and international management practices in the areas of marketing, operations, finance, and human resources.

## **MAGT 609**

### **Entrep-Small Bus Mgmt**

#### **Credit Hours: 3**

This course deals with the problems and challenges facing the management of small businesses in raising funds, marketing products and services, improving effectiveness and flexibility, and achieving growth.

## **MAGT 610**

### **Strategic Management**

#### **Credit Hours: 3**

This integrative course relies heavily on other business disciplines previously studied, and aims to promote students' business analysis skills. It places special emphasis on tools and techniques of strategic planning, decision- making and implementation. It covers areas such as: setting corporate missions and objectives, analysis of external environment and internal resource positions, evaluation of strategic options, implementation, and control.

**Prerequisite****MAGT 603 AND FINA 605****MAGT 611****Bus Ethics & Legal Envir****Credit Hours: 3**

This course covers legal and case analysis of court systems and dispute resolution, contracts, employment, and professional obligations that influence the decision-making process of managers. The relationship between personal values and business conditions and legal environment is examined. Other countries' business law and international agreements that govern the business environment in the world are also examined.

**MAGT 612****Business Research Methods****Credit Hours: 3**

This course is designed as an introductory seminar on research methods in business disciplines. The course provides an overview of research process design using both qualitative and quantitative methods as they are used in solving business problems. Students will learn basic knowledge and applications of qualitative and quantitative methods through the assigned reading materials which consist of the textbook and articles from major journals in the business fields. The course will focus on preparing research proposals for selected research endeavors.

**MAGT 615****Applied Graduation Project****Credit Hours: 3**

This is the final part of the program. This project provides students with the necessary skills to carry out research. Students are expected to submit a written project about a specific topic under the guidance of a member of academic staff. Students will present a project report of not more than 20,000 words.

**Prerequisite****MAGT 603 AND FINA 605****MAGT 800****Management Theory****Credit Hours: 3**

This Management Theory course will introduce students to the theories and empirical analyses conducted in the various areas of the discipline of Management. The theories we will examine will range from motivation theories to institutional theories. We will look at different levels of analysis, ranging from individual behaviour to population ecology. Both classic and current readings will be studied.

**MAGT 801****Advanced Strategic Management****Credit Hours: 3**

Understanding the shifts in internal and external contexts and their implications for organizations is essential to identifying new areas of strategic management study. This course aims at discussing advanced strategic management issues in a way that guides students to make sense of strategic practices and understand how organizations can adapt to changing environments. It also discusses competing schools of thought in strategic management, reviews the contributions of different disciplines to strategic management, and analyzes the strategic management literature.

**MAGT 802****Organization Behavior and Organization Theory****Credit Hours: 3**

Doctoral students will learn the theories about, and research done at, the micro- and macro- level in organizations. In Organization Behavior (OB), the topics of motivation, communication, decision making, leadership and groups will be studied. In Organization Theory (OT), the topics of organizational decision making and learning, organizing, organizational design, organizational power, institutional theories and change processes will be examined.

**MAGT 803****Supply Chain Management****Credit Hours: 3**

This course provides the Ph.D. students a critical knowledge of the main concepts and principles of supply chain management and how supply chains can be leveraged to build sustainable competitive advantage. The course has a strong focus on issues related to strategic and tactical level in effectively managing the supply chains.

**MAGT 804****Business, Government & Society****Credit Hours: 3**

Businesses operate in society within the formal and informal rules laid down by Governments. Ethics, corporate social responsibility, and sustainability are issues that may be defined differently by Business, Government, and Society. In this seminar, we will try to understand issues which lie at the interface of B,G, & S. Students will learn about different theoretical frameworks used to understand the issues, and read research papers that attempt to study and resolve the issues.

**MAGT 805****Managerial Decision Making****Credit Hours: 3**

Decision making in organizations can be studied at the individual, group and organizational levels, each contributing unique insights into how decisions are made in organizations. The diversity of this research, encompassing economics, psychology, and political science, enables scholars of management to choose appropriately from available theories to explain particular outcomes in organizations, and also design interventions at the individual, group and organizational levels to attain better outcomes.

**MAGT 806****Special Topics in Management Research for Qatar and GCC****Credit Hours: 3**

This course will feature a rotating set of topics based on the cutting-edge research conducted by the PhD faculty at QU and the topics with special importance to the state of Qatar and the GCC countries. Potential topics include localization (e.g., Qatarization, Emiratization and Saudization), public sector reform, sport events management, tourism management, health care management, mega projects management, executive leadership, change management and management from Islamic perspective. Students will review key studies in each of these areas and learn to recognize new areas of research.

**MAKT 101****Principles of Marketing****Credit Hours: 3**

This course focuses on the basic concepts of marketing. Topics covered include definition of marketing, evolution of marketing concept, basic issues facing marketing in the contemporary organization in addition to consumer behavior and market research and segmentation.

**MAKT 600****Consumer Behavior****Credit Hours: 3**

This course will focus on the theory behind consumer decision making as well as its marketing implications. Topics covered will include: the consumer decision making process, individual and environmental determinants of decision making, as well as the ethical implications of influencing consumers.

**MAKT 601****Integrated Marketing Communications****Credit Hours: 3**

This course will present the main principles, components and techniques required for building and implementing an integrated marketing communication program of an organization. The main focus will be on the strategic decisions for developing and monitoring effective marketing

communication plans that sustain and strengthen the organization's brands. It will allow students to gain knowledge of the MARCOM industry and the various contemporary IMC tools such as advertising, interactive and direct marketing, public relations, personal selling, sales promotion and Internet marketing.

## **MAKT 602**

### **Fundamentals of Sports Marketing**

#### **Credit Hours: 3**

This course will teach the students how to apply basic Marketing concepts in the sport's industry. Students will then develop an understanding of the strategic role of marketing in sports business firms. Topics to be covered include: an introduction to Sports Marketing, planning for Market selection decisions, planning the sports Marketing-mix, and implementing and controlling the strategic Marketing process. More specifically, this course will focus on sport market segmentation, licensed products, branding issues in sports and sports sponsorship.

## **MAKT 603**

### **Events Marketing**

#### **Credit Hours: 3**

This course highlights the key concepts and tools used to design and implement a successful event marketing strategy as an integral part of the marketing communications strategy. The course focuses on applying contemporary principles of strategic marketing to the process of event. These concepts are applicable to the broadest definition of the event management industry including festivals, sporting events, community celebrations, cultural events and arts productions. This course includes both theoretical and practical lectures.

## **MAKT 604**

### **Marketing Management**

#### **Credit Hours: 3**

This course develops students understanding of how organizations match the requirements of consumers in competitive environments, and develop strategies to create a

competitive edge. It covers areas such as analysis, planning, implementation, and control, as well as the marketing mix, exportation, and the social aspects of marketing.

## **MAKT 605**

### **Entrepreneurial Marketing**

#### **Credit Hours: 3**

This course provides students with an integrative framework in which marketing helps identify value creation opportunities that produce sustainable competitive advantage for the firm. Students will learn how to identify market opportunities and assess them as well as identify the challenges confronting marketers in entrepreneurial ventures and approaches for addressing them. The course will also discuss how marketing can be an entrepreneurial activity within organizations.

## **MAKT 606**

### **Advances in Sports Marketing**

#### **Credit Hours: 3**

The primary focus of this course is to discuss and analyze case studies related to the Qatari and international sport environment. The course will look at different actors of the industry such as teams, players, leagues, federations, events, managers, sponsors, equipment makers etc. Topics may include building loyalty or value co-recreation in sports, , sport tourism marketing, sport celebrity endorsements, sport brand equity / sport brand development, cultural perspectives in sport marketing, Corporate social responsibility and ethics in sport organizations, sports marketing in professional leagues and the Olympics.

## **MAKT 607**

### **Islamic Marketing and Branding**

#### **Credit Hours: 3**

This module introduces students to the field of Islamic marketing and branding. It supports the development of relevant employability, promotability and professional skills that enable students to develop integrated Islamic marketing and branding strategies for their organizations. Such strategies are needed in order to: (1) increase the

organizations' competitiveness within the Islamic marketplace and among Muslim consumers and (2) differentiate and strengthen their position within these markets and (3) introduce them into the global marketplace.

## **MAKT 608**

### **Special Topics in Marketing**

#### **Credit Hours: 3**

In this course, participants will cover a variety of relevant contemporary topics (which may change to reflect the existing marketing situation) and generate discussions which should result in original thoughts and effective strategies to deal with existing market complexities and realities. In particular, the impact of market dynamism resulting in new marketing practices and ever evolving concepts (such as marketing role of online and offline social networks, ethics and social corporate responsibility, customer-driven personalized branding and word of mouse and word of mouth etc.) will be analyzed and interpreted to inform and reshape marketing strategies for their current and future effectiveness.

## **MAKT 609**

### **Marketing Strategy**

#### **Credit Hours: 3**

This course focuses on the strategic framework of a firm's achieving profit goals and its impact on the marketing strategy, market and product business portfolio, marketing segmentation, and positioning strategies. Students gain experience in discussing and creating market based strategies for the future success of a business. The focus is on developing a set of unique strategies and competencies for a firm that, through strategic differentiation, leads to sustainable competitive advantage in the marketplace.

## **MAKT 614**

### **Marketing Research**

#### **Credit Hours: 3**

This course covers the marketing research process and methodology. Students will learn how to develop research designs suited to address different marketing problems and to

help in decision making. Students will learn how to collect, analyze, interpret data and write research reports.

## **MAKT 680**

### **Marketing Consulting Project**

#### **Credit Hours: 3**

This course provides the student with an understanding of the marketing challenges faced by managers in the industry through a hands-on project. It also Enhance the student's skills in solving problems in collaborative environments and prepares students for managing projects with demanding deadlines in a complex organization.

## **MAKT 690**

### **Thesis**

#### **Credit Hours: 0 to 6**

The aim of the thesis in the M.Sc. in Marketing program is to provide students with the necessary skills to carry out research. Students are expected to submit a research document tackling a well-defined research question related to the field of Marketing. Ultimately, students will gain a deep knowledge and understanding, and develop capabilities in conducting scientific research in the marketing discipline

## **MAKT 800**

### **MarketingTheory**

#### **Credit Hours: 3**

This Marketing seminar course is designed to help students gain a deep understanding of marketing theories and how they are applied in organizations. This course will introduce the essential conceptual and phenomenological aspects of the marketing field in addition to the methodologies and techniques that are applied in the execution process. During the course, several articles and case studies will be discussed in addition to classic readings. Some of the topics that will be covered in the Seminars include Behavioral Research Methods, Marketing Strategy, Consumer Behavior, Marketing Models, Branding and Marketing Communication.



## **MAKT 801**

### **Strategic Marketing**

**Credit Hours: 3**

The focus will be on formulating and implementing marketing strategy and how it provides on organization with a sustainable competitive. Research examining the history of marketing strategy research, marketing metrics, marketing organizational orientations, marketing capabilities, competition, brand equity, customer relationship , and innovation among others will be examined.

## **MAKT 802**

### **Consumer Behavior**

**Credit Hours: 3**

This course provides expertise in consumer behavior. Students will familiarize themselves with consumer behavior by reading articles that focus on research in psychology and marketing, and understand how theories and frameworks are developed. Students will gain an understanding of current theoretical and methodological approaches to consumer behavior, as well as advance this knowledge by developing testable hypotheses and theoretical perspectives building on the current knowledge base. Experience will be gained in presenting and writing research ideas, and reviewing articles.

## **MAKT 803**

### **Brand Management**

**Credit Hours: 3**

This Brand Management seminar provides students with the concepts and techniques required to conduct research on brands’ role for organizations and their stakeholders. Based on contemporary articles and classic readings, it reviews the major streams that have shaped branding research over the last three decades. This approach will be balanced by raising students’ awareness of emerging topics in branding research. The course adopts a broad perspective, addressing branding research in relation both to a multitude of possible stakeholders and other management disciplines.

## **MAKT 804**

### **Leadership and Communication**

**Credit Hours: 3**

The Leadership course is designed to introduce students to leadership perspectives and the role communication plays in effective leadership and management strategies. The course explores communication variables involved when leaders attempt to influence members to achieve a goal. Topics include power, credibility, motivation, research on leader traits, styles, and situations, and current models of leadership. The different leadership challenges posed by different group and organizational types will also be explored. The course will expose the students to conduct research in leadership and followership and the role of communication.

## **MAKT 805**

### **Special Topics in Marketing**

**Credit Hours: 3**

This course explores different contemporary marketing topics relevant to the market discipline. The course content will vary based on the availability and interest of the faculty and students. This course will cover theoretical foundations, methodological considerations and managerial implications of the topics selected.

## **MAKT 806**

### **Qualitative Marketing Research**

**Credit Hours: 3**

This course explores current theory and practice in the use of qualitative and interpretive research, including ethnography, case studies, archival research, participant observation, interview and focus group methods, as well as transcription and analysis. This course also prepares students to conduct the various stages of qualitative research from research design to writing a research manuscript.

## **MATH 103**

### **Intermediate Algebra**

**Credit Hours: 0 OR 3**

This course is an elementary course which provides the students with the basic concepts and skills about numbers, polynomials and rational expressions along with algebraic operations. Also, it furnishes students with basic facts about relations and functions along with sketching of graphs of certain functions.

## **MATS 500**

### **Modern Physics**

**Credit Hours: 3**

The special theory of relativity - Particle properties of wave - Wave properties of particles -Schrodenger’s equations and its applications to potential wells and potential barrier - tunnel effect - harmonic oscillat

## **MATS 501**

### **Physical Chemistry**

**Credit Hours: 3**

The kinetic model of gases: molecular interaction, the Vander Waals equation. Chemical thermodynamics: The first law, work, heat and energy, The second law, entropy and free energy, Free energy, chemical potential, effect of temperature and pressure on free energy changes, Tourton’s and Richard’s rules - Free energy changes and equilibrium constant, effect of temperature on the equilibrium constant. Absolute entropy- the third law. Phase diagrams and the phase rule: phase stability and phase transition, the physical liquid surface; surface tension, curved surface, and capillary action.

## **MATS 502**

### **Materials Science**

**Credit Hours: 3**

A study of relationships between the structure and the properties of materials. Atomic structure, bonding, crystalline

and molecular structure and imperfections. Mechanical properties of metals, alloys, polymers, and composites. Electrical properties of materials, semiconductors and ceramics. Creep, fatigue, fracture and corrosion in metals. Laboratory experiments

## **MATS 511**

### **Materials Principles & Charac.**

**Credit Hours: 3**

Atomic arrangement & its relation to the physical and chemical properties, dislocations, diffusion, materials design, crystal structures using X- rays, electrons and neutrons and the chemistry of structure atom by atom. Lab practice to characterize the molecular weight of the materials, thermal transitions, the rheology behavior, mechanical properties of materials, determination of surface energy of homogenous solid surface, AFM analysis, Fourier Transformation Infrared analysis, Ultra-Violet Visible (UV-VI) analysis, Scanning electron microscope (SEM) and Transmission electron microscope (TEM) for morphology studying.

## **MATS 512**

### **Therm. & Kinetics of Materials**

**Credit Hours: 3**

Thermodynamics for Materials provides an overview of behavior of matter. In Materials science, the thermodynamic matter is usually about chemical reaction systems. Thermodynamics is one of the sciences used in the analysis of processes. This course covers the basics of thermodynamics, and gives many examples for applying it to materials processing. The principles behind phase transformations and the underlying knowledge for phase diagrams are also briefly covered.

## **MATS 513**

### **Func. Properties of Materials**

**Credit Hours: 3**

This course explains the functional properties of different types of materials - metals, semiconductors, polymers, ceramic, glasses, composites, and biomaterials. Coverage includes

electrical, photovoltaic, optical, magnetic, and superconducting properties. It presents modern vision of magnetism, electrical- and thermal conductivity including superconductivity, and optical properties. It covers both nano/microscopic and phenomenological aspects.

#### **MATS 514**

##### **Research Methodology**

##### **Credit Hours: 3**

This course will develop the research and ethics abilities in Materials Science and Technology. The following will be covered, preliminary design of the research, sampling, validity, study measure, analyzing data and importance of research. All the students will be required to attend the graduate seminar. The students will decide with the supervisor the selected seminar series.

#### **MATS 520**

##### **Mechanics of Materials**

##### **Credit Hours: 3**

Mechanical integrity and response to adverse environmental factors. Properties of materials and the relation to the nature of the interatomic interactions, crystal structures, microstructures and defects. Stress, strain, elasticity, dislocation in crystal structures, plastic deformation, and fracture mechanics. Students will study the following in the lab: stress – strain tests, effect of chemical structure on thermal transitions in materials, structural factors affecting thermal transitions in materials, crystallinity of materials, elastic moduli of materials, flexural strength, nano and micro hardness of materials.

##### **Prerequisite**

##### **MATS 511**

#### **MATS 525**

##### **Sustainable Materials**

##### **Credit Hours: 3**

Explore the policy framework, operational practices, energy efficiency and economics of technologies for industrial and urban waste minimization, incineration, recycling and re-use. This unit develops scientists’ concepts and principles, and integrates these with industrial practice. Life cycle analysis and its use for life cycle assessment, LCA, of energy systems. Methodologies, boundary issues, data bases and applications. The uses of LCA will be illustrated with industrial case studies and with studies aimed at quantifying externalities associated with different technologies.

#### **MATS 530**

##### **Radiation Tech. for Materials**

##### **Credit Hours: 3**

Atomic and nuclear structure, nucleus and nuclear radiation, radioactive decay, neutron, fission and criticality, radiation interactions with matter, methods of radiation protection, radiation dosimetry, radiation effects, radiation criteria and exposure, external radiation protection and internal dosimetry and radiation. In lab, various types of radiation & their interactions with different materials, stopping distance, dosimetry and exposure measurements, various types of detectors, material properties that enable radiation detection as well as the effect of radiation on enhancing durability and other materials properties.

#### **MATS 535**

##### **Physical Metallurgy**

##### **Credit Hours: 3**

This course aims to introduce a theoretical basis for understanding how structure is controlled by means of providing a link between various transformations taking place in materials and the resulting microstructural and physical properties. Structure of metals, properties, dislocation theory and application, grain boundaries, annealing, precipitate hardening, diffusion of metals, phases, Fe-C phase diagram, alloy systems.

##### **Prerequisite**

##### **MATS 512**

#### **MATS 540**

##### **Adv. Materials & Composites**

##### **Credit Hours: 3**

Advanced materials, different types of composites & their applications e.g. biomaterials and energy saving materials. Advanced materials plasticity and applied dislocation theory emphasizing failure mechanisms and its modeling, understanding of nanocomposites systems, relationship between product and choice of process. Students will study the following in the lab: macro, micro, and nano mechanics of advanced materials, thermal analysis (DSC, and TGA), resistance measurements, dielectric spectroscopy, aging and degradation of advanced system, and structural determination by x- ray scattering.

##### **Prerequisite**

##### **MATS 511 AND MATS 513**

#### **MATS 545**

##### **Polymers Science and Analysis**

##### **Credit Hours: 3**

This course will introduce the techniques used for the analysis and characterization of polymers and polymeric based materials. It covers the main aspects of polymer science and technology e.g. identification, different types of polymerization, different techniques for molecular weight determination and molecular weight distribution, structure, surface properties, degradation mechanisms and mechanical properties.

##### **Prerequisite**

##### **MATS 511**

#### **MATS 550**

##### **Polymer Processing**

##### **Credit Hours: 3**

This course will address the flow behavior and properties related to processing of polymers into useful materials such as plastics. Processes covered in the course will include: Extrusion, Film Blowing, Injection Molding, Blow Molding, compression molding, Thermoforming, Rotational Molding, and Fiber Spinning. The relationship between process and product requirement will also be discussed.

##### **Prerequisite**

##### **MATS 545**

#### **MATS 555**

##### **Metals and Minerals Processing**

##### **Credit Hours: 3**

Processing and fabrication of minerals and metals are essential steps to make them useable and this also adds significant economic value when applied in the markets. All comprehensively used processes such as extraction, casting, rolling, extrusion, forging, heat treatment etc, are covered. This depends on an understanding how these extraction, shaping and fabrication processes affect the microstructure and properties of metals. This course covers the fabrication methods and their impacts on material properties.

##### **Prerequisite**

##### **MATS 535**

#### **MATS 560**

##### **Materials Science Modeling**

##### **Credit Hours: 3**

The students will understand and use Computational materials’ modeling as an increasingly important branch of materials science due to the evolution of modeling frameworks, invention of novel numerical algorithms and increased computer capability. As a consequence, modeling and simulation as emerging as powerful complementary approaches will be used as experiment and traditional theory. The outermost effective modeling is based on physical mechanisms and real internal structures at various levels (nano-, micro,-meso).

<b>Prerequisite</b>
<b>MATS 511</b>
<b>MATS 565</b>
<b>Surface Science and Corrosion</b>
<b>Credit Hours: 3</b>
Topics contributing to a better understanding of applications of surfaces, interfaces and nanostructured will be covered. The course will concern on atomic and molecular level of materials. Corrosion will be determined as an example related to the current need of the industry. This will be determined by many analytical techniques and structure analysis.
<b>Prerequisite</b>
<b>MATS 511</b>
<b>MATS 565</b>
<b>Surface Science and Corrosion</b>
<b>Credit Hours: 3</b>
Topics contributing to a better understanding of applications of surfaces, interfaces and nanostructured will be covered. The course will concern on atomic and molecular level of materials. Corrosion will be determined as an example related to the current need of the industry. This will be determined by many analytical techniques and structure analysis.
<b>MATS 570</b>
<b>Nano. &amp; Adv. Charact. Methods</b>
<b>Credit Hours: 3</b>
Introduction to nanotechnology and its applications in different materials will be introduced. Several advanced techniques will be used such as TEM, SEM and AFM. The students will learn the operational techniques of this equipment. Other lab practice techniques will also be introduced depending on the size of the students and availability of equipment (i.e. surface tensions analysis).

<b>Prerequisite</b>
<b>MATS 511</b>
<b>MATS 675</b>
<b>Special Topics</b>
<b>Credit Hours: 2</b>
The course will be designed according to specific students' needs and thesis/ project. Students will be directed to have some courses that will enrich their final project/ thesis. It is a tailored course that can be taken inside or outside Qatar depending on the program recommendation. Examples are: Statistical analysis, Pharmaceutical delivery.
<b>MATS 580</b>
<b>Graduate Seminar</b>
<b>Credit Hours: 0</b>
All the students will be required to attend the graduate seminar. The students will decide with the supervisor the selected seminar series. The student will give at least one seminar during this course. It is a pass/ fail course. This will include seminars from invited speakers from Industry and from regional and international universities.
<b>MATS 599</b>
<b>Thesis</b>
<b>Credit Hours: 3 OR 6</b>
Research thesis should include the background, methods, results and discussion as well as the conclusion of the work. It should be approved by the program. The project should deal with up to date research activities in the field of Materials Science and technology.
<b>MATS 690</b>
<b>Applied Materials Project</b>
<b>Credit Hours: 6</b>

<b>MECH 561</b>
<b>Research Project</b>
Research project should include the background, methods, results and discussion as well as the conclusion of the work. It should be approved by the program. The project should deal with up to date research activities in the field of Materials Science and technology.
<b>MATS 695</b>
<b>Thesis</b>
<b>Credit Hours: 9</b>
Research thesis should include the background, methods, results and discussion as well as the conclusion of the work. It should be approved by the program. The project should deal with up to date research activities in the field of Materials Science and technology.
<b>MECH 565</b>
<b>Advanced Thermodynamics</b>
<b>Credit Hours: 3</b>
Axiomatic presentation of fundamentals of classical thermodynamics. First law, equilibrium, Euler and Gibbs-Duhem relations. Entropy production, thermodynamic cycles. Legendre transformations and extremum principle. Maxwell relations and thermodynamic derivatives. Stability. Phase transitions. Nernst postulate. Chemical equilibrium. Applications.
<b>MECH 569</b>
<b>Solar Energy Utilization</b>
<b>Credit Hours: 3</b>
Design consideration of various concentrating collectors for thermal and photovoltaic applications. Solar thermal/electric power conservation. Solar thermal energy storage. Solar thermal design methods: f-chart utilizability. Solar space conditioning design and computer simulation models such as TRNSYS. Economic considerations. Solar desalination and other applications. Design projects in selected areas.

<b>MECH 581</b>
<b>Advanced Topics in Mech. Eng.</b>
<b>Credit Hours: 3</b>
A selection of state-of-the-art topics on mechanical engineering.
<b>MECH 582</b>
<b>Math Analysis of Mech. Eng Sys</b>
<b>Credit Hours: 3</b>
Application of mathematical methods to the description and analysis of mechanical engineering systems including computational techniques and analogies. Various solution methods including vectors, matrices, linear algebra, ordinary differential equations, and partial differential equations are introduced and studied.
<b>MECH 583</b>
<b>Robotics and Automation Tech.</b>
<b>Credit Hours: 3</b>
This course covers advanced kinematics topics and their application to more complex robotic systems such as redundant manipulators and parallel mechanisms. Topics covered will include: point, direction, line, and screw motion descriptions; homogeneous transformations; line and screw coordinates; quaternion representations; inverse displacement solutions by analytic, root finding, hybrid, and numerical methods; appropriate frames of reference; screw systems and transforms; local and globally optimum solutions of redundant rates; over-determined and near degenerate solutions; singularity analysis; and parallel manipulator kinematics
<b>MECH 584</b>
<b>Computational Fluid Dynamics</b>
<b>Credit Hours: 3</b>
This course enhances student knowledge and skills on problem solving capability by using software-based computational techniques. It will deliver more systematic study on modern



computational fluid dynamics knowledge in further detail, including: flow governing equations; numerical scheme and stability analysis; boundary condition definition in relation to flow characteristics; and flow results analysis and presentation for the understanding of in-depth flow physics. Students will use the commercial CFD suit ANSYS-Multiphysics/FLUENT with in-class theoretical studies.

#### **MECH 585**

##### **Advanced Heat Transfer**

##### **Credit Hours: 3**

This course covers conservation equations and gas kinetics. Unidirectional steady conduction. Multidirectional steady conduction, time-dependent conduction, external forced convection, internal forced convection, natural convection, convection with change of phase, heat exchangers, radiation, and mass transfer principles. The course utilizes Computational Fluid Dynamics (CFD) to investigate complex thermal systems.

#### **MECH 586**

##### **Advanced Fluid Mechanics**

##### **Credit Hours: 3**

This course covers control volume forms of balance laws governing fluid motion and applies to problems involving pumps, sprinklers. Derives and studies differential forms of governing equations for incompressible viscous flows. It covers qualitative aspects of lift and drag, loss of stability of laminar flows, turbulence, and vortex shedding. Also, it covers computational fluid dynamics that include flow governing equations; numerical scheme and stability analysis; boundary condition definition in relation to flow characteristics; and flow results analysis.

#### **MECH 587**

##### **Combustion and Emission**

##### **Credit Hours: 3**

Combustion modes. Chemical thermodynamics and chemical kinetics. Conservation equations of reacting flows. Multi-species transport. Ignition, flammability, and extinction.

Premixed and Nonpremixed flames. Combustion instabilities. Turbulent combustion. Liquid and solid burning. Pollutant Emissions.

#### **MECH 588**

##### **Energy Conversion**

##### **Credit Hours: 3**

Energy sources and their classification. Conventional energy conservation: Power plant and vapor cycles. Renewable energy: Solar energy with emphasis on solar cells, and wind energy, OTEC systems, geothermal energy. Nuclear fission and types of fission reactors. Fuel Cells.

#### **MECH 589**

##### **Renewable Energy Utilization**

##### **Credit Hours: 3**

This aims of this course are to assesses current and potential future energy systems, covers resources, extraction, conversion, and end-use, and emphasizes meeting regional and global energy needs in the 21st century in a sustainable manner. Different conventional and renewable energy technologies will be presented including fossil fuels, nuclear power, solar energy, biomass energy, and wind power. The students will learn the fundamental and quantitative principles of the renewable energy options, as well as their potential economic and societal impact. After taking the course, the students will be will be able to contribute to the selection and design of renewable energy systems.

#### **MECH 590**

##### **Materials Selection**

##### **Credit Hours: 3**

Selecting materials for engineering applications. The major families of materials, their properties, and how their properties are controlled; case studies and design projects emphasizing materials selection

#### **MECH 591**

##### **Conserv. & Recyc. of Mater.**

##### **Credit Hours: 3**

This course covers the importance of modern materials in advanced manufacturing processes; methods for materials recycling is the emphasis. Topics include the recycling of materials for steel, aluminum, automobile, foundry, glass, plastics, energy, construction, and other industries. Topics emphasized also include lifecycle assessment, de-manufacturing systems, design for environment, reengineered materials, and environmental risk management and product stewardship. Considers the elements of multi-lifecycle engineering from a systems perspective forming a framework for industrial ecology and a pathway towards sustainable development.

#### **MECH 592**

##### **Product Design**

##### **Credit Hours: 3**

This course covers the basics of design philosophy, methodology, principles, and theory as a foundation for surveying current research areas in the product development process. A brief introduction to concurrent design and life cycle design is followed by addressing the application of the design process to problem solving. The relationship between creativity and the design process is explored by using tools for solving engineering system design and synthesis problems. Computer, mathematical, and/or physical modeling of the problem and solution, the axiomatic design approach, Taguchi robust design, design of experiments, and prototyping are strongly emphasized topics.

#### **MECH 593**

##### **Advanced Corrosion Engineering**

##### **Credit Hours: 3**

This course describes the importance of corrosion problems in relation to material cost, reduced performance, reliability, and impact on the environment. The course covers the basics of what makes environments corrosive, with an introduction to corrosion chemistry, to corrosion thermodynamics, and to the electrochemical theory that relates corrosion current with mass and thickness loss rates of various materials. Forms of corrosion are described in relation to environmental accidents

and to methods commonly used to control corrosion. Design for corrosion prevention. Testing, monitoring and inspection. Materials selection for corrosion resistance.

#### **MECH 594**

##### **Failure Analysis**

##### **Credit Hours: 3**

Function of failure analysis. Techniques of failure analysis (investigation procedure). Testing used in failure analysis (Mechanical, Metallurgical, and NDT). Types of failure. Designing against failure. Failure due to excessive elastic deformation. Failure due to distortion. Brittle fracture (Fast fracture). Fatigue failure. Failure due to creep. Wear. Corrosion and oxidation. Practical: Case study from industry. Laboratory experiments.

#### **MECH 595**

##### **Advanced Physical Metallurgy**

##### **Credit Hours: 3**

The course cover structure of metals, analytical techniques, dislocation and plastic deformations, diffusion, solidification of metals, nucleation and growth kinetics, phase diagrams, thermally activated plastic deformations, fracture and fracture mechanics that includes cleavage, ductile fracture, fatigue, creep-fatigue and environmental cracking phenomena.

#### **MECH 596**

##### **Fatigue & Fracture Eng. Mat.**

##### **Credit Hours: 3**

Stress/Strain controlled Fatigue-Life prediction laws. Continuum fracture mechanics. Fracture modes. Fracture mechanics and microscopic plastic deformation/fracture mechanics combined approach. Cleavage, ductile fracture, fatigue, creep-fatigue and environmental cracking phenomena.

## MECH 597

### Coatings and Surface Eng.

#### Credit Hours: 3

Advanced coatings; metallic, ceramic & and polymeric coatings, high temperature corrosion, basic of chemical thermodynamics, thermodynamic stability And Ellingham diagrams Thin film Technology and Microelectronic.

## MECH 598

### Nanotechnology

#### Credit Hours: 3

The course covers synthesis, properties, characterization of nanoscience and recent technological advances in renewable energy, biotechnology, and nanodevices. Topics also include detail fundamental properties, fabrication and measuring methods of nanostructured materials, applications, and societal implication of nanoscale materials. Manufacturing of bulk nanostructured materials and nanocoatings, reactivity and handling of nanoparticles.

## MECH 599

### Mechanics of composites

#### Credit Hours: 3

Analysis, design and applications of laminated and chopped fiber reinforced composites. Microand macro-mechanical analysis of elastic constants, failure and environmental degradation. Design project.

## MECH 600

### Advanced Finite element Ana.

#### Credit Hours: 3

The objective is to teach in a unified manner the fundamentals of finite element analysis of solids, structures, and fluids. This includes the theoretical foundations and appropriate use of finite element methods, nonlinear finite element, bending of beams, verification and validation.

## MECH 652

### Advanced Special Topics II

#### Credit Hours: 3

This course will introduce you to a special topic in engineering that is outside of the regular curriculum of your program. The course enables external or internal lecturers with specialist knowledge to offer a special elective course in their area of expertise. The course is dedicated to allow for advance topics / latest findings / knowledge to be shared and taught to graduate students. It is a specific – focus course to cater for industrial and academia needs in Qatar

## MECH 690

### Master Project

#### Credit Hours: 3

The purpose of this course is for students to perform project in a subject gained from courses taken at the graduate level. The work culminates in a project report that is evaluated by the examiners.

## MECH 695

### Master Thesis

#### Credit Hours: 0 TO 6

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion.

## MECH 700

### Finite Element Analysis

#### Credit Hours: 0 TO 3

Typical engineering problems discussed on a physical basis. Setup and solution of problems by means of the existing

mathematical tools. The objective is to teach in a unified manner the fundamentals of finite element analysis of solids, structures, and fluids. This includes the theoretical foundations and appropriate use of finite element methods, nonlinear finite element, bending of beams, verification and validation.

## MECH 701

### Advanced Thermodynamics

#### Credit Hours: 0 TO 3

Axiomatic presentation of fundamentals of classical thermodynamics. First law, equilibrium, Euler and Gibbs-Duhem relations. Entropy production, thermodynamic cycles. Legendre transformations and extremum principle. Maxwell relations and thermodynamic derivatives. Stability. Phase transitions. Nernst postulate. Chemical equilibrium. Applications.

## MECH 702

### Solar Energy Utilization

#### Credit Hours: 0 TO 3

Design consideration of various concentrating collectors for thermal and photovoltaic applications. Solar thermal/ electric power conservation. Solar thermal energy storage. Solar thermal design methods: f-chart utilizability. Solar space conditioning design and computer simulation models such as TRNSYS. Economic considerations. Solar desalination and other applications. Design projects in selected areas.

## MECH 726

### Advanced Physical Metallurgy

#### Credit Hours: 3

The course covers structure of metals, analytical techniques, dislocation and plastic deformations, diffusion, solidification of metals, nucleation and growth kinetics, phase diagrams, thermally activated plastic deformations, fracture and fracture mechanics that includes cleavage, ductile fracture, fatigue, creep-fatigue and environmental cracking phenomena

## MECH 741

### Advanced Special Topics I

#### Credit Hours: 3

A selection of state-of-the-art topics on mechanical engineering.

## MECH 742

### Advanced Special Topics II

#### Credit Hours: 3

A selection of state-of-the-art topics on mechanical engineering

## MECH 899

### PhD Thesis

#### Credit Hours: 0 TO 48

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.

## MEDI 720

### Clinical Translational Research

#### Credit Hours: 3

This course aims at equipping students with the critical in depth knowledge, skills and competencies required for the process of translating research discoveries into novel healthcare products and practices. Students will develop the core research competencies in addition to the clinical and translational research principles. Students will further gain deep insight into the guiding principles of clinical trials and critical appraisal skills of clinical research findings.

## **MEDI 730**

### **Designing Clinical Research Studies**

#### **Credit Hours: 3**

This course will develop students’ critical understanding of the design of clinical trial with a special emphasis on clinical trials. The main aim of this course is expanding the students’ knowledge about the principles of the design, conduct and analysis of clinical trials during the development of pharmaceuticals. The course will deeply focus on the principles for design of randomized clinical trials and how they should be reported. Students will review designs used for clinical trials in addition to mechanics of clinical trials such as randomization and blinding of intervention. Students will review in depth how to analyze and interpret clinical trials.

## **MEDI 740**

### **Ethical issues in clinical research and research involving human subjects**

#### **Credit Hours: 3**

The aim of this course is to examine contemporary ethical issues in clinical research and develop skills in applying ethical theories and principles to practical settings. The course will focus on the history of ethics in general, its main characteristics as a field of inquiry, methods of ethical deliberation and Good Clinical Practice guidelines. The course will familiarize the students with broadly accepted principles in research ethics and apply these principles to topical ethical issues encountered in clinical research and population-based studies.

## **MEDI 860**

### **Directed studies in Clinical investigation I**

#### **Credit Hours: 1**

This course will create a forum for students to engage in formal discussion of research topics in an interdisciplinary environment involving faculty, other students, guest speakers. Students will attend and contribute as speakers to the college weekly research seminars. All PhD students will be expected to deliver a minimum of one formal oral presentation each academic year.

## **MEDI 861**

### **Directed studies in Clinical investigation II**

#### **Credit Hours: 1**

This course will create a forum for students to engage in formal discussion of research topics in an interdisciplinary environment involving faculty, other students, guest speakers. Students will attend and contribute as speakers to the college weekly research seminars. All PhD students will be expected to deliver a minimum of one formal oral presentation each academic year.

## **MEDI 862**

### **Directed studies in Clinical investigation III**

#### **Credit Hours: 1**

This course will create a forum for students to engage in formal discussion of research topics in an interdisciplinary environment involving faculty, other students, guest speakers. Students will attend and contribute as speakers to the college weekly research seminars. All PhD students will be expected to deliver a minimum of one formal oral presentation each academic year.

## **MEDI 863**

### **Directed studies in Clinical investigation IV**

#### **Credit Hours: 1**

This course will create a forum for students to engage in formal discussion of research topics in an interdisciplinary environment involving faculty, other students, guest speakers. Students will attend and contribute as speakers to the college weekly research seminars. All PhD students will be expected to deliver a minimum of one formal oral presentation each academic year.

## **MEDI 899**

### **Dissertation Research**

#### **Credit Hours: 0**

This course will consist of a major research project which will have been approved by the doctoral student supervisory committee and the compilation of a formal structured document (dissertation/thesis) to describe the background, hypothesis, methods, results, conclusions, limitations, future research work and bibliography associated with the research project leading at the last semester of the program to a dissertation defense.

## **MIST 201**

### **Introduction to Management Information Systems (MIS)**

#### **Credit Hours: 3**

This course provides students with the basic concepts of information systems as well as the use and management of current information technologies for business processes. Course emphasizes electronic commerce, information technology contribution to competitive advantage, and enterprise resource planning.

## **MIST 606**

### **Mgmt Information Systems**

#### **Credit Hours: 3**

This course provides an introductory theoretical and managerial overview of the area of information systems. Students will be exposed to various information technologies, the methods and tools for developing and managing information systems, and the impact of information systems on organizations and on society at large. Case-studies, in-class discussions, or projects will be used to also steer the student's ability to communicate effectively to information systems professionals.

## **MIST 613**

### **Information Security**

#### **Credit Hours: 3**

This course covers the analysis, design, development, implementation, and maintenance of information security systems. Topics include: legal, ethical, professional, personnel issues; risk management; technology; and physical security.

## **MIST 616**

### **Enterprise Resource Planning**

#### **Credit Hours: 3**

This course introduces the use of technology in all aspects of a business. It explores the use of technology in customer relations management, accounting and financial applications, purchasing and production tools, sales and marketing functions, and human resources management. Students gain a heightened awareness of emerging technologies and trends in e-business.

## **MIST 660**

### **Business Analytics**

#### **Credit Hours: 3**

This course will present business analytics concepts and techniques. Specific topics to be covered include: relevance of data-driven analytics to improving decision making, data preparation, preprocessing, data reduction, data quality issues, modeling techniques, model development, model assessment, model selection, and model deployment. The latest business analytics tools will be used on real-life data sets to illustrate the course concepts.

## **MIST 670**

### **Data Mining for Business**

#### **Credit Hours: 3**

This course will present data mining concepts and techniques. Specific topics to be covered include: strategic importance of data mining in today's data deluge business environment, datadriven competitive advantage, data quality issues, data mining methods, models, and tools. In addition real-world data mining applications in various domains will be covered and the latest data mining tools will be used on real-life data sets to illustrate the course concepts.



## **MIST 801**

### **Doctoral Seminar in Info.Syst.**

#### **Credit Hours: 3**

This course aims to update the doctorate students on the existing research literature related to organizational issues in information systems so they will be able to develop their own critical perspective on past and current research in organizational information systems issues. The course will focus also on how the students will develop their own research method to tackle a specific research question related to organizational issues in information systems.

## **MIST 802**

### **Information Systems Pedagogy**

#### **Credit Hours: 3**

This course will provide doctorate students with in-depth information systems pedagogy so that they will be prepared to enter the classroom as a teacher with excellent competency. The course will focus on emerging information systems pedagogy and research opportunities to information systems researchers. There will be emphasis on the pedagogy of mean core courses in the information systems field such as systems analysis and design, database, networking, Information Systems, among Students will be exposed to relevant research in the area of techniques, methods, and tools of information systems pedagogy.

## **MIST 803**

### **Data Analytics**

#### **Credit Hours: 3**

The course explores how data can be exploited as a valuable asset to generate intelligent insights and drive business decisions. It exposes the different perspectives that organizations have on data and knowledge and their management. The different forms and sources of data are discussed including healthcare, social media, and neuroscience data. The seminar also exposes the different techniques and technologies to model and visualize data.

## **MIST 804**

### **Information Privacy & Security**

#### **Credit Hours: 3**

This course introduces the existing literature on information privacy and security from the perspective of the individual, the organization, and society. Major streams of research at all levels of analysis will be examined. The social and legal impact of technology is examined. Associated research methods and reference disciplines are investigated. Challenges in privacy and security research are discussed.

## **MIST 805**

### **Open Innovations in Information Systems**

#### **Credit Hours: 3**

This course discusses innovations that resulted from joint and open collaboration between business, consumer, and government. It highlights the value of cumulative innovations as a result of openness, sharing, freeware, and partnerships. The seminar explains how data, computing resources, and other technologies can be exploited to create innovations of the mass in the distributed environment of our current networked society. New breakthroughs such as MOOC (massive open online course) and Open Source are also covered.

## **MIST 806**

### **Special in Information Systems Research**

#### **Credit Hours: 3**

This course will explore of a specific topic, issue, or trend in the information systems. This course may be repeated for credit in different topics.

## **MIST 807**

### **Directed Research in Information Systems**

#### **Credit Hours: 3**

This course offers doctoral students the opportunity to examine a specific area of information systems knowledge

working closely with a member of the faculty who has substantive interest in the proposed area. The subject matter of the course will relate to the student's research interests and the faculty member's area of expertise. The primary products of this course are an extensive literature review as well as an annotated bibliography that could serve as the foundation for subsequent research.

## **MSCE 591**

### **Corrosion Engineering**

#### **Credit Hours: 3**

This course covers the principles of electrochemistry as well as the essential elements of electrochemical corrosion. The aim is to provide an understanding of corrosion, the mechanisms of corrosion, the thermodynamics and electrochemistry behind corrosion, electrochemical methods to study and measure corrosion, and the principles and methods leading to mitigation of corrosion problems that might occur in engineering practice. On the basis of the knowledge of corrosion phenomena, the methods are introduced how one can protect metals and alloys against corrosion.

## **MSCE 592**

### **Failure Analysis and Prevention**

#### **Credit Hours: 3**

The aim of the course is to discuss the tools that can be used to select the appropriate material for a given engineering application. Various failure modes will be studied to identify failure mechanism in real life examples and how to prevent failure. Reviews of available materials, manufacturing processes and mechanical behaviour of materials including fracture, fatigue, creep, corrosion and wear are also included in this course.

## **MSCE 651**

### **Special Topics I**

#### **Credit Hours: 3**

This course will introduce you to a special topic in materials engineering that is outside of the regular curriculum of your

program. The course enables external or internal lecturers with specialist knowledge to offer a special elective course in their area of expertise. The course is dedicated to allow for advance topics / latest findings / knowledge to be shared and taught to graduate students. It is a specific – focus course to cater for industrial and academia needs in Qatar.

## **MSCE 652**

### **Special Topics II**

#### **Credit Hours: 3**

This course will introduce you to a special topic in materials engineering that is outside of the regular curriculum of your program. The course enables external or internal lecturers with specialist knowledge to offer a special elective course in their area of expertise. The course is dedicated to allow for advance topics / latest findings / knowledge to be shared and taught to graduate students. It is a specific – focus course to cater for industrial and academia needs in Qatar.

## **MSCE 761**

### **Special Topics I**

#### **Credit Hours: 3**

This course will introduce you to a special topic in materials engineering that is outside of the regular curriculum of your program. The course enables external or internal lecturers with specialist knowledge to offer a special elective course in their area of expertise. The course is dedicated to allow for advance topics / latest findings / knowledge to be shared and taught to graduate students. It is a specific – focus course to cater for industrial and academic needs in Qatar.

## **MSCE 762**

### **Special Topics II**

#### **Credit Hours: 3**

This course will introduce you to a special topic in materials engineering that is outside of the regular curriculum of your program. The course enables external or internal lecturers with specialist knowledge to offer a special elective course in their area of expertise. The course is dedicated to allow for advance topics / latest findings / knowledge to be shared and taught to

graduate students. It is a specific – focus course to cater for industrial and academic needs in Qatar.

#### **MSCE 899**

#### **PhD Thesis**

#### **Credit Hours: 0 TO 48**

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.

#### **MUPD 600**

#### **Planning Theory**

#### **Credit Hours: 3**

This course introduces issues that pertain to history and definition of planning, determinants, goals and objectives of spatial planning, role, legitimacy and authority of planning, general and specific theories, such as Descriptive, Prescriptive and Normative theories also in the context of developing countries.

#### **MUPD 601**

#### **Resrch & Stat Analysis in Plng**

#### **Credit Hours: 3**

The course offers an overview of research methods in planning and management, probability, statistics, and decision theory and their applications in city planning, basic probability concepts, data classification and summarization, statistical sampling, hypothesis testing, goodness of fit, regression analysis, analysis of variance, contingency tables, and elementary Bayesian decision making. Computer statistical packages are utilized in different assignments delivered and practiced throughout the semester.

#### **Prerequisite**

#### **MUPD 620**

#### **MUPD 610**

#### **Urban Planning Legislation**

#### **Credit Hours: 3**

This course is an overview of planning legislations and a short history of planning process in Qatar and the Gulf Region. It covers methods, techniques and instruments for implementing plans through decrees and administrative acts, the basis for urban and regional planning and its relation to Shariah Law as well as the structure and organization of Qatari public planning administration, discussion of zoning procedures, subdivision review practices and budget preparation and execution.

#### **MUPD 620**

#### **Urban and Regional Land Use**

#### **Credit Hours: 3**

This course introduces aspects that pertain to history and definition of land use planning, the concept of policy, programming and planning, determinants and systems guiding land use development, socio-economic development and Land use, space requirements, spatial distribution and localization concepts, land use planning models, procedures for formal land use plans.

#### **MUPD 611**

#### **Urban Economics**

#### **Credit Hours: 3**

This course covers issues of distribution of population and economic activities in urban areas, microeconomic principles to understand the economic nature of the urban system. The economic aspects and models of urban growth and city size, land-use pattern, housing, transportation, environmental problems, unemployment, and public policy are discussed.

#### **MUPD 620**

#### **Urban and Regional Land Use**

#### **Credit Hours: 3**

This course introduces aspects that pertain to history and definition of land use planning, the concept of policy, programming and planning, determinants and systems guiding land use development, socio-economic development and Land use, space requirements, spatial distribution and localization concepts, land use planning models, procedures for formal land use plans.

#### **MUPD 621**

#### **Computer Aided Planning**

#### **Credit Hours: 3**

Information and experience with the rapidly growing field of Computer-Aided Planning. Management Information Systems (MIS), Geographic Information Systems (GIS), Decision Support Systems (DSS), Knowledge Based Expert Systems and Automated Mapping and Graphing are introduced. Basic principles are emphasized that are common to the design and use of software in this area.

#### **Prerequisite**

#### **MUPD 620**

#### **MUPD 650**

#### **Cltrl & Phscl Aspct of Isl Cty**

#### **Credit Hours: 3**

This course involves aspects related to historical development of the traditional Muslim towns, determinants of “Islamic” urban spatial structure, the physical aspects of the urban form and the role of the socio-cultural factors and legal system in the structure of Muslim towns, urban design principles of traditional Arab and Muslim towns, discussion of the problems of contemporary Islamic cities and the relevance of the traditional design principles to build future cities in the Islamic world.

#### **MUPD 651**

#### **Urban Renewal Planning**

#### **Credit Hours: 3**

This course discusses the changes in urban land use and the socio-economic structures of urban settings. Emphasis is on historical districts revitalization and regeneration. Goals, plans and operations of adaptive re-use and regeneration of local traditional as well as modern districts are discussed and presented. Case studies from historic Middle Eastern and European cities are discussed and analyzed.

#### **MUPD 652**

#### **Theory on Urban Form & Design**

#### **Credit Hours: 3**

This course is a review of architecture and urban design history, theories and concepts of urban spatial design, elements and analysis of the concept of urban space, major theoretical and critical responses to the crises of the modern urban environment, discussion of urban design concepts through analysis of urban settings in the region.

#### **MUPD 653**

#### **Design and Regeneration**

#### **Credit Hours: 3**

This course provides a theoretical basis for the understanding of design in the built environment, and an appreciation of the evolving integration of aspects of design and regeneration in both urban and rural environments. The theoretical material includes consideration of aesthetics, urban morphology, rural settlement, design method and sustainable development, and encourages multi-disciplinary and critical perspectives on these aspects of the subject. The multi-disciplinary approach and the critical perspectives also embraces the components of integrated regeneration.

#### **MUPD 654**

#### **Urban Transportation Systems**

#### **Credit Hours: 3**

This course involves discussion and analysis of planning and management of urban transportation systems, functional description, planning, and analysis of transportation systems, characteristics of major transportation modes in Qatar and neighboring countries. Current research, technology, and policy issues are stressed.

## **MUPD 655**

### **City&Regional Plan.in Arid Zon**

#### **Credit Hours: 3**

This course involves discussion of problems and planning aspects specific to arid zones; different factors influencing the built environment in the arid regions including climate, water, vegetation, and soil; emphasis on basic considerations on problems of urban sites; economically related aspects of urbanized regions; specific problems of construction and site selection; the design of specific urban physical city-scape and landscape in arid zones forms; physical planning for sustainable resources.

## **MUPD 656**

### **Environmental Planning & Magt**

#### **Credit Hours: 3**

This course provides discussion of major aspects of environmental analysis, planning and management; problems and principles of site analysis, land use methods, and geologic hazard planning; natural resource, pollution and residuals management; economics of renewable and non-renewable resources, and the economic cost of environmental controls; environmental impact assessment and local case studies of environmental management.

## **MUPD 657**

### **Techniques of Envir.Impact.Ass**

#### **Credit Hours: 3**

This course introduces concepts, legal frameworks, public policies, approaches, and methodologies utilized in determining environmental impacts of proposed urban and costal projects. Processes of environmental impact assessment and implementation are emphasized. A focus on the nature

and consequences of the impact from different perspectives is undertaken including economic development, social equity, and the environment.

## **MUPD 700**

### **Local& Regional Sustainability**

#### **Credit Hours: 3**

This course covers the relationship between local and regional regeneration within a context of integrated sustainable development. The first section examines policy issues such as compact development; smart growth; local development frameworks, polycentric development, and the new urbanism. This is undertaken in a comparative perspective, addressing particularly the experience in Europe and the US with highlights on some regional practices. The second section considers planning responses to this policy agenda in terms of building sustainable communities, and the links within a planning hierarchy between local and regional dimensions.

#### **Prerequisite**

### **MUPD 600 AND MUPD 610 AND MUPD 620**

## **MUPD 701**

### **Urban Infrastructure Planning**

#### **Credit Hours: 3**

This course covers planning for and management of urban infrastructure projects. Identification of physical infrastructure systems such as water and sewage systems, urban transportation networks, .etc.; management, finance and budgeting, and operation and maintenance of infrastructure projects. Case studies of local and regional urban infrastructure systems are discussed.

#### **Prerequisite**

### **MUPD 600 AND MUPD 610 AND MUPD 620**

## **MUPD 702**

### **Housing Policies and Planning**

#### **Credit Hours: 3**

This course in an overview of the housing stocks and its function as a commodity, the private housing development process versus the public one, the user and housing design, housing rehabilitation and conservation as a community development strategy, adaptive reuse and urban revitalization and manufactured housing, the overall evaluation of housing supply and demand versus housing need based on local demographic developments and general housing strategies at the local, regional, and national levels.

#### **Prerequisite**

### **MUPD 600 AND MUPD 610 AND MUPD 620**

## **MUPD 710**

### **Sustainable Urban &Land Design**

#### **Credit Hours: 3**

This course provides a theoretical basis for the understanding of design in the built environment, and an appreciation of the evolving integration of aspects of design and regeneration in urban, rural, and desert environments. The theoretical material includes consideration of aesthetics, urban morphology, rural and desert settlement, design method and sustainable development, and encourages multi-disciplinary and critical perspectives on these aspects.

#### **Prerequisite**

### **MUPD 600 AND MUPD 610 AND MUPD 620**

## **MUPD 711**

### **Urban Design in Practice**

#### **Credit Hours: 3**

The focus of this project-based course is the integration of theories and principles of urban design with practice

applications in a real-world context. Lectures and workshops build on the theoretical foundations and background knowledge students already have. The course is designed to equip students with relevant skills in topics such as site appraisal, urban design analysis, the design of urban infill and physical aspects of the public realm. Students are expected to think creatively and rationally in working with a 'live' design challenge. The project component of the course is introduced early and runs parallel with and complementary to the lectures/workshops. It focuses on the theme of sensitive change and innovative intervention in dynamic urban environments.

#### **Prerequisite**

### **MUPD 600 AND MUPD 610 AND MUPD 620**

## **MUPD 712**

### **Evol of Built Form &Townscapes**

#### **Credit Hours: 3**

The course focuses on the settlement evolution, the townscape qualities and the distinctive architectural features of the Middle Eastern towns. The first section covers the history of settlement desert environments, the second section locates the Arab and Islamic city in a wider regional context, the third section considers the development of built form and architectural style with particular reference to the middle east and north Africa, and the fourth and final section relates settlement and architectural development to their policy context, with particular focus on sustainability and conservation policies.

#### **Prerequisite**

### **MUPD 600 AND MUPD 610 AND MUPD 620**

## **MUPD 750**

### **Thesis focuses on Urban Plan.**

#### **Credit Hours: 9**

Thesis students are asked to consider potential topics for either a thesis or a work-based project, preferably related to the core research themes in the department. If students decide to



complete a thesis, it is to be a substantial research thesis, and meet the normal standards for this level of academic study.

## MUPD 752

### Theory of Urban Form and Design

#### Credit Hours: 3

This course begins with a morphological review of architecture and urban form, through the lens of urban design history spanning from antiquity to the current. It further navigates through various theories and concepts of urban spatial design, time, space, order, place and placelessness and sprawl. It follows with a discussion of urban concepts through critical analysis of urban settings in the region along with their influencing parameters. This course provides a peripheral over view of smart-city, cybercity and digital city and their relevance to the Gulf region.

## MUPD 760

### Thesis focuses on Urban Design

#### Credit Hours: 9

Thesis students are asked to consider potential topics for either a thesis or a work-based project, preferably related to the core research themes in the department. If students decide to complete a thesis, it is to be a substantial research thesis, and meet the normal standards for this level of academic study.

## PHAP 701

### Participatory Design and Planning

#### Credit Hours: 3

This course familiarizes students with the most common methods and skills used in this field, the pitfalls and potential of public engagement processes, ways to integrate public input into planning and policy-making, and the areas of innovation in participatory planning practice. The course is based on the fact that engaging the public through interactive participatory methods has become standard practice in the planning and design professions.

## PHAP 702

### Architecture and Urbanism of Globalized Cities

#### Credit Hours: 3

This course introduces the city and challenges of contemporary globalization. It introduces Globalization as one of the most defining, and fraught, phenomena of modern times. It involves discussions and seminars on problems, questions, and arguments relevant to the built environment in a global world. It seeks to understand the rapid development of architecture and urbanism and changes in the global economy that affects the lives of people around the world.

## PHAP 710

### Building Performance Assessments and Measurements

#### Credit Hours: 3

This course focuses on the complex issue of assessing existing buildings for their overall performance, particularly energy use, environmental impact and occupant satisfaction to identify potentials for improvement. This is key to ensure that sustainable buildings perform to their potential. Post-occupancy building evaluations will be used and outputs compared to performance benchmarks on which buildings can be rated and compared.

## PHAP 711

### History, Theory, and Criticism in Architecture

#### Credit Hours: 3

This course introduces critical consideration and special topics in architectural history, theory and criticism which students construct their own informed and reasoned ideas about what the topic means from their perspective. The course offers overviews on the role of criticism in building theories and investigates the chronological evolution of architectural criticism. Types and methods of critical writing and criticism are also investigated. Students will have the opportunities to engage in critical discussions and develop critiques of building or urban settings.

## PHAP 712

### Energy and Buildings

#### Credit Hours: 3

This course introduces emerging green building concepts, energy systems, and cost benefit analysis. Topics include net zero design, green building, alternative energies, energy conservation, micro-generation technologies, dual use of energy, passive cooling, occupant behavior in relation to environmental conditions, retrofitting, and related considerations. The course offers an overview on the identification of the optimal energy performance achievable with various types of buildings and service systems; reduction of infiltration; control systems and strategies to achieve optimal energy performance; and other topics.

## PHAP 751

### Advanced Special Topics in Architecture I

#### Credit Hours: 3

Selected academic topics initiated by students, student teams, or faculty and directed by faculty member in the area of architecture and urban design. Topics are selected to reflect issues relevant to regional and local trends, historical and contemporary and would help students focus on the key issues involved in the shaping of the built environment.

## PHAP 752

### Advanced Special Topics in Architecture II

#### Credit Hours: 3

Selected academic topics initiated by students, student teams, or faculty and directed by faculty member in the area of architecture and urban design. Topics are selected to reflect issues relevant to regional and local trends, historical and contemporary and would help students focus on the key issues involved in the shaping of the built environment.

## PHAP 899

### Thesis

#### Credit Hours: 0 TO 48

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree.

## PHAR 605

### Advanced Pharmacy Research, Evaluation and Presentation Skills I

#### Credit Hours: 2

PHAR605 is the first of a series of two courses designed to advance the PharmD student's knowledge, comprehension, application, analysis, synthesis, evaluation and communication skills pertaining to health care research. This course builds on knowledge, skills, attitudes and values previously developed in a BSc (Pharm) program, and is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree program in pharmacy.

## PHAR 605

### Advanced Pharmacy Research, Evaluation and Presentation Skills I

#### Credit Hours: 2

PHAR605 is the first of a series of two courses designed to advance the PharmD student's knowledge, comprehension, application, analysis, synthesis, evaluation and communication skills pertaining to health care research. This course builds on knowledge, skills, attitudes and values previously developed in a BSc (Pharm) program, and is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree program in pharmacy.

## PHAR 606

### Advanced Pharmacy Research, Evaluation and Presentation Skills II

#### Credit Hours: 2

PHAR606 is the second of a series of two courses designed to advance the PharmD student's knowledge, comprehension, application, analysis, synthesis, evaluation and communication skills pertaining to health care research. This course builds on knowledge, skills, attitudes and values previously developed in a BSc (Pharm) program, and is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree program in pharmacy.

## PHAR 620

### Res.Des.Ethics & Stat. Meth. I

#### Credit Hours: 2

This graduate course aims to expand upon principles, application and controversies pertaining to bench and clinical research design and statistical methodology delivered at the undergraduate level. Topics also include issues such as grantsmanship, research ethics, data management, coauthorship, intellectual property and associated topics. This is a team taught course involving faculty within the college and invited faculty from other departments and/or institutions.

## PHAR 621

### Res.Des.Ethics & Stat. Meth.II

#### Credit Hours: 2

This graduate course aims to expand upon principles, application and controversies pertaining to bench and clinical research design and statistical methodology delivered at the undergraduate level. Topics also include issues such as grantsmanship, research ethics, data management, coauthorship, intellectual property and associated topics. This is a team taught course involving faculty within the college and invited faculty from other departments and/or institutions.

## PHAR 625

### Life Cycle of a Medication

#### Credit Hours: 2

This graduate course aims to provide students with an understanding of the process of drug discovery and development from the identification of novel drug targets to the introduction of new drugs into clinical practice and eventual withdrawal. To promote an interdisciplinary approach to the topics, this is a team taught course involving faculty within the college and invited faculty from other departments and/or institutions.

## PHAR 630

### Advanced Professional Practice Internships I

#### Credit Hours: 4

PHAR630 is the first of a series of eight advanced professional practice internships designed to provide PharmD students with a variety of practice-based opportunities to integrate, reinforce and advance the knowledge, skills, attitudes and values developed in a BSc (Pharm) program. These internships are undertaken in select health care delivery (e.g. hospital, clinic, community) and related sites and are structured to include a set of formalized activities which are designed to achieve specific learning objectives. Select pharmacy practitioners serve as mentors, role models, trainers and assessors of student learning. This course is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree program in pharmacy.

## PHAR 631

### Advanced Professional Practice Internships II

#### Credit Hours: 4

PHAR631 is the second of a series of eight advanced professional practice internships designed to provide PharmD students with a variety of practice-based opportunities to integrate, reinforce and advance the knowledge, skills, attitudes and values developed in a BSc (Pharm) program and previous PharmD internships. These internships are undertaken in select health care delivery (e.g. hospital, clinic, community) and related sites and are structured to include a set of formalized activities which are designed to achieve specific learning objectives. Select pharmacy practitioners serve as mentors, role models, trainers and assessors of student learning. This course is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree in pharmacy.

## PHAR 632

### Advanced Professional Practice Internships III

#### Credit Hours: 4

PHAR632 is the third of a series of eight advanced professional practice internships designed to provide PharmD students with a variety of practice-based opportunities to integrate, reinforce and advance the knowledge, skills, attitudes and values developed in a BSc (Pharm) program and previous PharmD internships. These internships are undertaken in select health care delivery (e.g. hospital, clinic, community) and related sites and are structured to include a set of formalized activities which are designed to achieve specific learning objectives. Select pharmacy practitioners serve as mentors, role models, trainers and assessors of student learning. This course is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree program in pharmacy.

## PHAR 633

### Advanced Professional Practice Internships IV

#### Credit Hours: 4

PHAR633 is the fourth of a series of eight advanced professional practice internships designed to provide PharmD students with a variety of practice-based opportunities to integrate, reinforce and advance the knowledge, skills, attitudes and values developed in a BSc (Pharm) program and previous PharmD internships. These internships are undertaken in select health care delivery (e.g. hospital, clinic, community) and related sites and are structured to include a set of formalized activities which are designed to achieve specific learning objectives. Select pharmacy practitioners serve as mentors, role models, trainers and assessors of student learning. This course is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree program in pharmacy.

## PHAR 634

### Advanced Professional Practice Internships V

#### Credit Hours: 4

PHAR634 is the fifth of a series of eight advanced professional practice internships designed to provide PharmD students

with a variety of practice-based opportunities to integrate, reinforce and advance the knowledge, skills, attitudes and values developed in a BSc (Pharm) program. These internships are undertaken in select health care delivery (e.g. hospital, clinic, community) and related sites and are structured to include a set of formalized activities which are designed to achieve specific learning objectives. Select pharmacy practitioners serve as mentors, role models, trainers and assessors of student learning. This course is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree program in pharmacy.

## PHAR 635

### Advanced Professional Practice Internships VI

#### Credit Hours: 4

PHAR635 is the sixth of a series of eight advanced professional practice internships designed to provide PharmD students with a variety of practice-based opportunities to integrate, reinforce and advance the knowledge, skills, attitudes and values developed in a BSc (Pharm) program and previous PharmD internships. These internships are undertaken in select health care delivery (e.g. hospital, clinic, community) and related sites and are structured to include a set of formalized activities which are designed to achieve specific learning objectives. Select pharmacy practitioners serve as mentors, role models, trainers and assessors of student learning. This course is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree program in pharmacy.

## PHAR 636

### Advanced Professional Practice Internships VII

#### Credit Hours: 4

PHAR636 is the seventh of a series of eight advanced professional practice internships designed to provide PharmD students with a variety of practice-based opportunities to integrate, reinforce and advance the knowledge, skills, attitudes and values developed in a BSc (Pharm) program and previous PharmD internships. These internships are undertaken in select health care delivery (e.g. hospital, clinic, community) and related sites and are structured to include a set of formalized activities which are designed to achieve specific learning objectives. Select pharmacy practitioners serve as mentors, role models, trainers and assessors of student learning. This course is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree program in pharmacy.

## PHAR 637

### Advanced Professional Practice Internships VIII

#### Credit Hours: 4

PHAR637 is the eighth of a series of eight advanced professional practice internships designed to provide PharmD students with a variety of practice-based opportunities to integrate, reinforce and advance the knowledge, skills, attitudes and values developed in a BSc (Pharm) program and previous PharmD internships. These internships are undertaken in select health care delivery (e.g. hospital, clinic, community) and related sites and are structured to include a set of formalized activities which are designed to achieve specific learning objectives. Select pharmacy practitioners serve as mentors, role models, trainers and assessors of student learning. This course is designed to comply with CCAPP accreditation standards and guidelines for an advanced degree program in pharmacy.

## PHAR 640

### Graduate Seminar I

#### Credit Hours: 1

This graduate course aims to provide students with the opportunity to participate in the formal discussion of research topics in an interdisciplinary, formal presentation environment involving other students, faculty and guests external to the college and campus. The existing biweekly faculty research seminars are expanded to include graduate student involvement as presenters and attendees. Graduate students are expected to deliver a minimum of one formal presentation each academic year.

## PHAR 641

### Graduate Seminar II

#### Credit Hours: 1

This graduate course aims to provide students with the opportunity to participate in the formal discussion of research topics in an interdisciplinary, formal presentation environment involving other students, faculty and guests external to the college and campus. The existing biweekly faculty research seminars are expanded to include graduate student involvement as presenters and attendees. Graduate students are expected to deliver a minimum of one formal presentation each academic year.

### Prerequisite

#### PHAR 640

## PHAR 642

### Graduate Seminar III

#### Credit Hours: 1

This graduate course aims to provide students with the opportunity to participate in the formal discussion of research topics in an interdisciplinary, formal presentation environment involving other students, faculty and guests external to the college and campus. The existing biweekly faculty research seminars are expanded to include graduate student involvement as presenters and attendees. Graduate students are expected to deliver a minimum of one formal presentation each academic year.

### Prerequisite

#### PHAR 641

## PHAR 643

### Graduate Seminar IV

#### Credit Hours: 1

This graduate course aims to provide students with the opportunity to participate in the formal discussion of research topics in an interdisciplinary, formal presentation environment involving other students, faculty and guests external to the college and campus. The existing biweekly faculty research seminars are expanded to include graduate student involvement as presenters and attendees. Graduate students are expected to deliver a minimum of one formal presentation each academic year.

### Prerequisite

#### PHAR 642

## PHAR 650

### Eng-based Comm. for Grad. Stu.

#### Credit Hours: 2

This graduate course aims to provide students with the opportunity to further enhance their oral and written English communication skills to prepare these students for employment in an academic and/or research environment. This includes the writing skills for a research paper and a thesis/dissertation, responding to journal reviewers, grant writing and related topics. In addition to theory, students are given opportunities to practice their communication skills and they receive extensive feedback from both the instructors and colleagues.

## PHAR 660

### Directed Studies in Pharm. Sci

#### Credit Hours: 2

This graduate course aims to provide students with a closely supervised research experience and involves the completion of a project under the supervision of the primary faculty supervisor or a designated faculty member. Projects could include experiences in an external laboratory for the purpose of gaining knowledge and skills pertaining to experimental techniques not available on the QU campus.

## PHAR 670

### Adv. Top. in Pharm. Sci I

#### Credit Hours: 3

This graduate course aims to provide intensive instruction in the intended areas of specialization within the board scope of pharmaceutical sciences. The modules will cover contemporary and advance topics in different disciplines in pharmaceutical sciences

## PHAR 671

### Adv. Top. in Pharm. Sci II

#### Credit Hours: 3

This graduate course aims to provide intensive individualized instruction in the intended area of specialization (pharmacognosy, medicinal chemistry, pharmacology, pharmacokinetics, pharmaceuticals, pharmacogenomics) across two semesters. The specific topics are determined by the Primary Faculty Supervisor with approval by the Graduate Student Supervisory Committee. Whenever applicable, graduate students in two or more specialties (e.g. medicinal chemistry and pharmacognosy) undertake combined course work.

## PHAR 680

### Electives in Pharm. Sci.

#### Credit Hours: 3

These graduate elective courses focus on either of the following areas: Principles of Drug Design, Biotransformation of Drugs, Pharmaceutical Biotechnology, or another area within pharmaceutical sciences. Other electives are added according to demand and availability.

## PHAR 690

### MSc (Pharm) Thesis

#### Credit Hours: 5

This course consists of a major research project which has been approved by the graduate student supervisory committee, the creation of a formal structured document to describe background, hypothesis, methods, results, conclusions, limitations, future research requirements and bibliography associated with the research project, and finally the thesis defense. The thesis is defended by the student in a formal oral examination process in the final semester.

## PHAR 691

### MSc (Pharm) Thesis

#### Credit Hours: 5

This course consists of a major research project which has been approved by the graduate student supervisory committee, the creation of a formal structured document to describe background, hypothesis, methods, results, conclusions, limitations, future research requirements and bibliography



associated with the research project, and finally the thesis defense. The thesis is defended by the student in a formal oral examination process in the final semester.

## **PRLW 510**

### **Advanced studies in Civil Law**

#### **Credit Hours: 3**

This course includes analytical study for core topic and theories within civil law, such as freedom to contract, adhesion contracts, exceptional circumstances, the base of civil liability, nullification of civil transaction, principle of good faith, subcontracting, e-contracting, evidence, and the obligatory force of the contract. It also includes some novel issues within law of contract, and property. It explores Qatari and comparative trends and application on these topics.

## **PRLW 511**

### **Advanced Studies in Commercial Law**

#### **Credit Hours: 3**

This course aims to study and analysis in-depth a number of commercial law subjects. This study will cover all legal aspects relating to the topic being studied, in addition to the jurisprudence aspects. Here we give examples of some of the topics that can be the subject matter of current course: commercial agencies, obligations of the parties in the commercial sale, recent rules and cases relating to cheques, ADR, in particular arbitration and mediation, carriage of persons and goods, consumer protection laws, Law of the financial markets and Electronic Commerce Law.

## **PRLW 512**

### **Comparative Civil Law**

#### **Credit Hours: 3**

The course deals with principles of comparative study, its importance, feasibility, as well as elements resulted in distinctive legislations and legal systems. The course also determines the role of Islamic sharia 'a in comparative studies. It presents practical models of significant comparative studies i.e. civil protection of IPR and it applications, legal protection of human body, and consumer protection.

## **PRLW 513**

### **Principles and skills of Legal Research**

#### **Credit Hours: 3**

The course was modeled to provide students with basic tool necessary for legal research, through make them familiar with definition of legal research and its relation with scientific research, its importance in postgraduate studies, methodologies, researcher and research requirements, research steps, referencing, and all the skills required to conduct distinguish legal research.

## **PRLW 550**

### **Insurance Contracts**

#### **Credit Hours: 3**

This course deals with insurance contracts through exploring its' technical bases, types, and the methods by which risks, payment and the insurance coverage can be assessed. It also studies the formation of insurance contracts, its requirements, capacity, and its effects for both parties. Moreover, it provides for the contemporary insurance application, especially compulsory insurance against civil liability resulted from motors accidents in the State of Qatar. This course coves as well maritime and aviation insurance.

## **PRLW 551**

### **Civil liability of professionals**

#### **Credit Hours: 3**

This course tackles the issue of civil liability – contractual or tort- , its base, requirements. The course also deals with some new norms of liability, such as environmental liability, professional liability for physician, lawyers, journalists, tourist services providers, ethics of professions and the risks that may affect civil liability doctrines and other issues related to civil liability within Qatari and comparative jurisdictions.

## **PRLW 552**

### **International construction contracts**

#### **Credit Hours: 3**

This course provides a thorough study for International construction contracts, its forms, formation, terms, legal nature, and liabilities of its parties. It also provides practical study for some models of international construction contracts set by FIDIC in comparison with construction contract within Qatari jurisdiction.

## **PRLW 553**

### **Conflict of laws in Inter.Con.**

#### **Credit Hours: 3**

This course provides advanced study for an important topic in private international relations which is international contracts. It deals with these contracts, its formation, obligations within private international law, the applicable law, and the competent authorities to settle disputes arises out of these contracts, be it official national or private international authorities.

## **PRLW 554**

### **International Banking transactions**

#### **Credit Hours: 3**

This course will focus on the legal framework of banking transactions in Qatar. A commercial bank plays an important role in financially satisfying commercial transactions. However, the bank may not perform this role unless it is financed through other sources like deposits and creditable current accounts. This course will study in depth the most important types of banking transactions, such as documentary credits, demand guarantees or letter of credit, current accounts, bank transfers, and deposits. The study in this course will be analytically and comparative.

## **PRLW 555**

### **Commercial Concern**

#### **Credit Hours: 3**

This course aims to provide an in-depth study and analysis of the commercial concern. It presents the essence of the commercial concern, its main characteristics and its legal nature (notion). It also provides a study of the most important elements of the material and moral elements of the

commercial concern, in addition to all the transactions relating to it, sale, lease and mortgage as well as unfair competition practices. A special focus will be given to the effect of E-commerce on the traditional concept of commercial concern.

## **PRLW 556**

### **Contemporary issues in Corporate Law**

#### **Credit Hours: 3**

This study aims to provide an analytical study of the contemporary subjects relating to the law of commercial companies. The study of these subjects will in depth and in accordance with the Companies law of Qatar compared with other relevant laws. The study will not limited to the legal aspects, but will cover aspects of jurisprudence relating to the subject matter of the course. Here we give examples of some of the topics that can be a subject of the current course: legal aspects of corporate governance, merger and acquisition, new types of companies, such as single person company and the responsibility of the owner of the capital, administrative Control on companies in general and on joint stock companies in particular, the protection of the shareholders in capital companies, liability of the Director of the company in accordance with the recent courts' decisions, oil and gas company as a development tool and regulation of Multinational enterprises and liability of Multinational enterprises regarding the protection of human rights.

## **PRLW 610**

### **Practical studies in Law of Civil Procedures**

#### **Credit Hours: 3**

This will be a course that includes a detailed study of one topic of law of procedure in civil and commercial matters that relate to judicial structure , rules of jurisdiction, litigation , rules of civil procedure on judgment, the use of alternative dispute resolution systems, and execution of judgments. It also calls for a comparative study.

## **PRLW 611**

### **Sources of legislation in Islamic Sharia**

#### **Credit Hours: 3**

This course deals with principles of Islamic jurisprudence, sources of rules, i.e. Qur’an, Suuna, Consensus, Qiyas, Masaleh Mursala, Sad al zara’a, Qawl al Sahabi. The course provides definition for each of these sources and its validity and merit. It also deals with some contemporary applications within civil law, such as insurance against civil liability, proof via hi-tech means, e-signature, fingerprint, and e-contracting from sharia’a perspective.

## **PRLW 690**

### **Thesis**

#### **Credit Hours: 0 to 6**

This course offers students the opportunity to work on a comprehensive research project under the supervision of a faculty member. Students are expected to complete and submit their thesis report for defense

## **PRLW 817**

### **Insurance Contracts**

#### **Credit Hours: 3**

This course deals with insurance contracts through exploring its’ technical bases, types, and the methods by which risks, payment and the insurance coverage can be assessed. It also studies the formation of insurance contracts, its requirements, capacity, and its effects for both parties. Moreover, it provides for the contemporary insurance application, especially compulsory insurance against civil liability resulted from motors accidents in the State of Qatar. This course coves as well maritime and aviation insurance.

## **PRLW 818**

### **Civil liability of professionals**

#### **Credit Hours: 3**

This course tackles the issue of civil liability – contractual or tort- , its base, requirements. The course also deals with some new norms of liability, such as environmental liability, professional liability for physician, lawyers, journalists, tourist services providers, ethics of professions and the risks that may affect civil liability doctrines and other issues related to civil liability within Qatari and comparative jurisdictions.

## **PRLW 819**

### **International Construction contracts**

#### **Credit Hours: 3**

This course provides a thorough study for International construction contracts, its forms, formation, terms, legal nature, and liabilities of its parties. It also provides practical study for some models of international construction contracts set by FIDIC in comparison with construction contract within Qatari jurisdiction.

## **PRLW 820**

### **Conflict of laws in International Contracts**

#### **Credit Hours: 3**

This course provides advanced study for an important topic in private international relations which is international contracts. It deals with these contracts, its formation, obligations within private international law, the applicable law, and the competent authorities to settle disputes arises out of these contracts, be it official national or private international authorities.

## **PRLW 821**

### **International Banking Transactions**

#### **Credit Hours: 3**

This course will focus on the legal framework of banking transactions in Qatar. A commercial bank plays an important role in financially satisfying commercial transactions. However, the bank may not perform this role unless it is financed through other sources like deposits and creditable current accounts. This course will study in depth the most important types of banking transactions, such as documentary credits, demand guarantees or letter of credit, current accounts, bank transfers, and deposits. The study in this course will be analytically and comparative.

## **PRLW 822**

### **Commercial Concern**

#### **Credit Hours: 3**

This course aims to provide an in-depth study and analysis of the commercial concern. It presents the essence of the commercial concern, its main characteristics and its legal nature (notion). It also provides a study of the most important elements of the material and moral elements of the commercial concern, in addition to all the transactions relating to it, sale, lease and mortgage as well as unfair competition practices. A special focus will be given to the effect of E-commerce on the traditional concept of commercial concern.

## **PRLW 823**

### **Contemporary issues in Corporate Law**

#### **Credit Hours: 3**

This course aims to provide an analytical study of the contemporary subjects relating to the law of commercial companies. The study of these subjects will in depth and in accordance with the Companies law of Qatar compared with other relevant laws. The study will not limited to the legal aspects, but will cover aspects of jurisprudence relating to the subject matter of the course.

Here we give examples of some of the topics that can be a subject of the current course: legal aspects of corporate governance, merger and acquisition, new types of companies, such as single person company and the responsibility of the owner of the capital, administrative Control on companies in general and on joint stock companies in particular, the protection of the shareholders in capital companies, liability of the Director of the company in accordance with the recent courts’ decisions, oil and gas company as a development tool and regulation of Multinational enterprises and liability of Multinational enterprises regarding the protection of human rights.

## **PUBH 600**

### **Concepts and Methods of Epidemiology**

#### **Credit Hours: 3**

This course introduces the main principles, concepts and methods of epidemiology. It covers sources of data, morbidity and mortality measures, epidemiological study designs & critical appraisal of epidemiological studies, epidemic investigation, causation and causal inference. Both basic methods and applications to public health and healthcare will be covered in this course.

## **PUBH 601**

### **Concepts and Methods of Biostatistics**

#### **Credit Hours: 3**

This course is an introductory course that introduces the basic concepts of biostatistics in addition to the application of statistical methods in public health. It covers data organization, analysis, interpretation & presentation. The course covers both parametric and non-parametric methods, testing hypothesis, comparing means & proportions, introducing ANOVA, correlation, different types of regression analysis at an introductory level.

## **PUBH 602**

### **Social & Behavioral Sciences**

#### **Credit Hours: 3**

This course deals with social and behavioral theories and models as they apply to health. It includes the application of social and behavioral theories on public health problems. The roles of cultural, ethnic, gender and other factors on health behavior will be addressed in the course. It will explore some important concepts including inequity and use case studies to elaborate on these concepts.

## **PUBH 603**

### **Research Design and Methods**

#### **Credit Hours: 3**

This course discusses the theoretical and practical aspects of conducting research in human populations. Both quantitative and qualitative research methods are addressed. The course follows the research cycle including formulation of the study questions, literature review, hypothesis formulation (as applicable), choice of study design, sampling, and data collection. The implications of those steps on data analysis and interpretation are discussed throughout the course. Legal, regulatory and ethical issues are explored in this course.

## **PUBH 604**

### **Foun. of Environmental Health**

#### **Credit Hours: 3**

The course introduces the main concepts of environmental health, focusing on the main environmental health issues resulting from the interaction between people and the environment. Among the topics discussed in this course are water availability, safety and quality, air pollution and quality, waste-disposal, environmental and occupational diseases, sustainable environment, assessment, prevention and management of environmental hazards.

## **PUBH 605**

### **Health Services Management and Leadership**

#### **Credit Hours: 3**

This course focuses on understanding the components, functions and resources of health systems. It introduces the principles and components of health management, organization and administration of health care institutions, including health information systems. It will introduce the role of systems thinking in addressing the challenges facing health care system managers and executives. It will also address leadership theory and practice, effective leadership styles, and context variables affecting leadership.

## **PUBH 606**

### **Clinical Epidemiology**

#### **Credit Hours: 3**

This course covers the principles of epidemiology as applied to clinical questions and clinical practice. Students taking this course will acquire the needed skills to understand issues related to the effectiveness of clinical therapies, critical appraisal of clinical epidemiological research, usefulness of screening and diagnostic tools, and other related clinical epidemiology issues.

## **PUBH 607**

### **Special Topics I**

## **Credit Hours: 3**

This course introduces students to important emerging issues in public health that are not covered in depth in other courses. The course aims to broaden the horizons of public health students through exploring current relevant topics.

## **PUBH 608**

### **Special Topics II**

#### **Credit Hours: 3**

This course introduces students to important emerging issues in public health that are not covered in depth in other courses. The course aims to broaden the horizons of public health students through exploring current relevant topics.

## **PUBH 610**

### **Advanced Epidemiologic Methods**

#### **Credit Hours: 3**

This course covers advanced methodological design and analysis of various epidemiological studies. It focuses on details of both observational and experimental studies. The studies include case reports, case-series, ecological, cross-sectional, case-control, and cohort studies, in addition to design, implementation and analysis of clinical trials. Systematic reviews and meta-analysis will be also addressed.

## **PUBH 611**

### **Epidemiology of Communicable and Non-Communicable Diseases**

#### **Credit Hours: 3**

Communicable and non-communicable diseases are important contributors to the disease burden in Qatar and the world. This course explores in detail some of the most important non-communicable diseases based on their mortality and morbidity at, local, regional, and global levels. It explores the epidemiology, risk factors, national and global prevention and control strategies, and public health impact of those diseases.

## **PUBH 612**

### **Categorical Data Analysis**

#### **Credit Hours: 3**

The course focuses on using various statistical techniques and tests for the analysis of categorical data at the bivariate and multivariate levels. Among the topics discussed are data distributions, measures of association, measures of effect, contingency table analysis, regression analysis, log linear models, and maximum likelihood estimations. The examples and applications used in this course are performed on health – related data using various software, such STATA, SPSS and R.

## **PUBH 613**

### **Continuous Data Analysis**

#### **Credit Hours: 3**

The course focuses on the concepts and methods of continuous data analysis. It addresses, analysis of variance at different levels including MANOVA, MANCOVA, and multiple linear regression methods among others. The applications on health data include control for confounding and effect modification. The course focuses on practical application of statistical methods using various statistical packages.

## **PUBH 614**

### **Evidence-Based Public Health**

#### **Credit Hours: 3**

This course introduces the foundations and principle of the evidence-based approach and its use in assessing and evaluating public health issues. The students will learn how to find evidence from credible sources and how to evaluate its quality. The students will also be introduced to the use of multiple evidence-based analytical methods to assess selected public health issues with a special focus on evaluating public health interventions.

## **PUBH 615**

### **Supervised Field Experience- Epidemiology**

#### **Credit Hours: 3**

The supervised field experience- Epidemiology provides an opportunity to students to gain practical experience and to implement knowledge and skills earned from previous courses into a practical analytical exercise.

## **PUBH 620**

### **Introduction to Quality, Risk and Safety**

#### **Credit Hours: 3**

This course introduces the foundations of quality, risk and safety concepts and applications in healthcare, and different health settings. The course will also give a historical overview of the development of the quality and safety notion in health care and its relation to healthcare improvement.

## **PUBH 621**

### **Quality, Risk and Safety Methods and Tools**

#### **Credit Hours: 3**

This course explores the tools and methods used in assessing quality, risk and safety in healthcare and the application of these methods in practice. It introduces also the concepts of enhancing clinical effectiveness, improving quality of care and the use of certain tools such as total quality management and continuous quality improvement.

## **PUBH 622**

### **Health Economics**

#### **Credit Hours: 3**

This course aims to provide students with a general understanding of health economics. It will focus on the conceptual basis for economic evaluation, and introduce basic skills in the design and implementation of economic evaluation including cost-effectiveness and cost-benefit analysis. The effects of economic evaluation on decision-making will also be explored.

## **PUBH 623**

### **Ethics, Law and Regulatory Issues in Health**



**Credit Hours: 3**

This course examines the ethical, legal and regulatory issues affecting healthcare, public health research and practice. It provides students with an overview of ethical concepts and theories, the interaction with law and regulations and their effect on the healthcare practice, decision-making and research.

**PUBH 624****Introduction to process improvement in health care****Credit Hours: 2**

The course explores the scope of health improvement process. It introduces improvement theories, concepts, phases, steps, and the different measures of improvement process implementation including process, outcome and balancing measures.

**PUBH 625****Supervised Field Experience- Quality and Safety in Clinical Settings****Credit Hours: 1**

This Supervised field experience provides an opportunity for students to be exposed to health improvement initiatives within the health system related to quality and safety methods and to implement knowledge and skills earned from previous courses in a specific clinical setting.

**PUBH 640****Practicum****Credit Hours: 3**

The practicum provides students with practical skills through placement in an institution related to the concentration that they chose.

**PUBH 641****Research Project****Credit Hours: 3**

The course provides students with the opportunity to conduct research projects individually or in groups. The topic of choice is usually within the students’ interests and concentration tracks. Students are expected to make a presentation and hand a written report on topic.

**PUBH 695****Thesis****Credit Hours: 0 to 6**

This course offers students the opportunity to work on an important research topic related to their PUBH concentration under the supervision of one or more faculty members, which must be arranged and approved prior to registration. A written proposal, progress reports, and a final thesis are required. There will be an oral defense scheduled after the submission of the thesis.

**PHUP 751****Advanced Special Topics I in Urban Planning****Credit Hours: 3**

Selected academic topics initiated by students, student teams, or faculty and directed by faculty member in the area of urban and regional planning. Topics are selected to reflect issues relevant to regional and local trends, historical and contemporary and would help students focus on the key issues involved in the shaping of the built environment.

**PHUP 752****Advanced Special Topics II in Urban Planning****Credit Hours: 3**

Selected academic topics initiated by students, student teams, or faculty and directed by faculty member in the area of urban and regional planning. Topics are selected to reflect issues relevant to regional and local trends, historical and contemporary and would help students focus on the key issues involved in the shaping of the built environment.

**PHUP 753****Sustainable Urbanism****Credit Hours: 3**

This course provides an understanding of the theory and practice of sustainable urban development, the evolution of urban environmental crisis and the emergence of “sustainability”, considers alternative theories and models for conceptualizing and managing relationships between human activity and ecological processes in urban areas, examines major issues/challenges to urban sustainability and explore alternative strategies for dealing with them taking into consideration ecological impacts, the needs of different types of stakeholders, and the wide array of policy-making and management tools available.

**PHUP 899****PhD Thesis****Credit Hours: 0 TO 48**

A distinct and original contribution to basic knowledge of the subject. The student will be required to show initiative and resourcefulness in overcoming both theoretical and practical difficulties by devising novel ways and means of achieving objectives that elude the more conventional approaches to them. The course is a test of initiative and of the student's ability to accept responsibility and bring a task to a satisfactory conclusion. Straightforward development work, coupled with a critical survey of the previous work although important, is not sufficient for a PhD degree

**PULW 510****Comparative Studies of the General Theory of Crime****Credit Hours: 3**

This Course provides a comparative and in depth analytical study of one of the principal topics of the general theory of crime, such as; Criminal Participation, Criminal Excuses, Mens Rea, Criminal Justifications, and other related topics. The Course specifically compares between the Qatari law and the Qatari Courts' case law, on one side, and other legal and judicial systems in the world, on the other.

**PULW 511****Comparative Constitutional law****Credit Hours: 3**

This course addresses the Qatari constitutional system through a comparative study with other common law and civil law countries. This is done by highlighting a number of similarities and divergences in a variety of constitutional law topics such as the forms of government; the governing regime; the three branches of the government and their respective powers: the executive power, the legislative power and the judicial power; the relationship between the executive and legislative power, and the judicial review over legislations and regulations in Qatar according to law no. 12 of 2008 as well as other comparative legal systems. The course also addresses the Qatari constitutional system with respect to exceptional circumstances (cases of necessity), its applications such as in the absence of Parliament and the emergency state, the governing authority in such circumstances, potential exceptional measures that could be taken and finally the judicial review over these measures.

**PULW 512****Advanced Studies in Public International Law****Credit Hours: 3**

This course will cover essential introductory topics during the first few weeks, such as the nature of PIL, its sources and its relationship with the national or municipal law, and its sources. It will then embark on fine issues of current concerns such as the doctrine of humanitarian intervention, the law of armed conflicts, the role of the International Criminal Court in the prosecuting of the war criminals, the recognition of de facto governments and the rebels in the contemporary international law...etc.

**PULW 513****Principles and skills of Legal Research****Credit Hours: 3**

The course was modeled to provide students with basic tool necessary for legal research, through making them familiar with definition of legal research and its relation with scientific research, its importance in postgraduate studies, methodologies, researcher and research requirements, research steps, referencing, and all the skills required to

conduct distinguish legal research. The course also covers the legal research process, and tracking research as well as other strategies for efficient and effective legal research. Class sessions will integrate the use of online, print, and other research sources. Students are required to complete a series of assignments, in addition to other course requirements.

## **PULW 550**

### **Fundamental Right and Freedoms**

#### **Credit Hours: 3**

This course seeks to identify the essence of rights and liberties in the Qatari constitutional system and other comparative constitutional systems. It addresses the various rights and freedoms protected on both national and international level, the regulating authority and its relevant powers to regulate rights and freedoms. Moreover, the course highlights the constitutional and judicial guarantees incorporated into the constitutional text against any potential attempts to diminish or restrict the free enjoyment of public rights and freedoms. Finally, this course underscores the intersection between the public rights and freedoms and other constitutional principles that may burden those rights and freedoms. And finally examines a number of judicial precedents that have safeguarded rights and liberties in ordinary and exceptional circumstances.

## **PULW 551**

### **Administrative Contracts**

#### **Credit Hours: 3**

The Public Procurement course offers an inductive and analytic study of tenders and biddings law (Procurement Law) No.26 of 2005 in comparison to foreign laws. This course introduces methods of contracting through public (general), private (limited) and local tenders. It also reviews the other methods of concluding administrative contracts such as the direct procurement and practice. It further examines types of administrative contracts and their contemporary applications. In addition to studying the provisions regulating tenders and analyzing the rights and duties of the contracting parties, provisions relating to the Central Tenders Committee as well as other committees will be examined. The course then highlights the administrative dispute resolution mechanisms through the domestic courts or arbitration.

## **PULW 552**

### **Cyber Crimes**

#### **Credit Hours: 3**

This Course provides an advanced analytical study of one of the most significant contemporary crimes, that is Cyber Crimes. In general, the Course seeks to highlight the specific policies adopted by the Qatari and comparative legislations in combating this type of crimes. The Course also offers an analytical study of several Cyber Crimes that involve criminal acts committed using a computer or/and a network, for instance; online piracy, credit card fraud, electronic forgery, databases destruction, cyber terrorism, electronic interception, cyber fraud, and illegal use of information technologies. This Course, furthermore, studies and analyses the Qatari and comparative case law that pertains to Cyber Crimes, and identifies different entities which endeavour to fight this type of crimes.

## **PULW 553**

### **Cross-Border Organized Crimes**

#### **Credit Hours: 3**

This Course tackles one of the cross-border organized crimes, such as; Drug trafficking, Human trafficking, terrorist crimes, as they are defined under the Qatari relevant laws and as compared with the most relevant international and regional treaties. The Course also seeks to identify the criminal institutions with jurisdiction over such crimes in Qatar and how to effectively combat these crimes through international and regional cooperation between relevant law enforcement institutions.

## **PULW 554**

### **The Law of International Responsibility**

#### **Credit Hours: 3**

The law of international responsibility plays a fundamental role in the modern system of international law, surpassed by none and paralleled only by the law of treaties. This course seeks to cover the entirety of the field of international law and the main topics of international law before embarking on the law of responsibility. This should allow students to be refreshed with the general knowledge required in understanding various topics in public international law before indulging into a precise understanding of the liability of

the subjects of international law in cases where a breach of law occurs. A particular focus on the work of the International Law Commission. It provides detailed discussion and analysis of the historically predominant topics of State responsibility. It also covers both the topic of responsibility of international organizations, on which the ILC's work is ongoing (a set of draft Articles having been adopted on first reading in 2009), and that of liability for harmful activities not prohibited under international law on which the ILC adopted drafts in 2001 and 2006.

## **PULW 555**

### **Peaceful Settlement of Inter-State Disputes**

#### **Credit Hours: 3**

The aim of this course is the study of the judicial settlement of inter-State disputes, with particular focus on the International Court of Justice. The course covers matters of jurisdiction as well as procedural issues, such as preliminary objections, non-appearance, provisional measures, counter-claims and third-party intervention. The scope of the Court's judgment in a given case and the possibility of its interpretation and revision are also covered. Participants will develop both their theoretical and practical skills. The diplomatic settlement of disputes, such as negotiation, mediation good offices shall be deciphered in line with the available political settlement available particularly under the UN charter. Arbitration with special focus on some recent cases shall also be covered together with the available judicial settlement mechanisms with special concern of some recent cases that has relevance to the gulf states, such as the ICJ judgment as per Hiwar case (Qatar V Bahrain)..

## **PULW 610**

### **Comparative Criminal Procedure Law**

#### **Credit Hours: 3**

This Course provides a comparative and in depth analytical study of one of the criminal procedures law topics, such as; Due process guarantees, nullification of criminal procedures theory, principles and types of criminal evidence, pre-trial detention (Remand), rules of criminal jurisdiction, and the theory of criminal sentencing and the possibility of challenging such sentences before the same court that issued the sentence or before higher courts. The Course specifically compares between the Qatari law and the Qatari courts' case law and judicial precedents, on one side, and other legal and judicial systems in the world, on the other.

## **PULW 611**

### **Comparative Administrative Law**

#### **Credit Hours: 3**

This course addresses the contemporary practical studies in administrative law by analyzing the various administrative legislations in Qatar and comparative legal systems. It further attempts to analyze a wide variety of administrative topics such as: the centralized and decentralized administrative systems; the powers of administration, administrative and economic public utilities, administrative regulations and decisions and administrative contracts. This course further explores the judicial review over the administration unilateral and contractual legal actions and their compliance with the principle of legality; The authority to review the administration's actions in ordinary and exceptional circumstances; the peculiar role of administrative judiciary to review the administration actions; the legal and judicial considerations that may affect the judicial review over the administration legal actions in ordinary and exceptional circumstances. Moreover, this course investigates the human resources management law in Qatar and its peers in comparative legal systems by exploring a wide variety of topics such as the professional rights and duties of the employee; the performance evaluation report and disciplinary accountability.

## **PULW 690**

### **Thesis**

#### **Credit Hours: 0 to 6**

This course offers students the opportunity to work on a comprehensive research project under the supervision of a faculty member. Students are expected to complete and submit their thesis report for defense.

## **PULW 800**

### **Legal Research Skills**

#### **Credit Hours: 3**

This course examines legal research methods (inductive, deductive, comparative, and descriptive) , theories of legal research methods, mechanisms for building a research proposal, criteria for choosing a topic, data collection process, referencing, and then how to manage the information and the previous process to serve the dissertation objectives and the research question. The course also deals with academic

integrity and the referencing rules, various methods of legal thinking, logical analysis, logical induction, and mechanisms of mental reasoning such as measurement, reasoning, and interpretation. This course generally provides students with a set of mental abilities and moral values that should met in the legal researcher.

## **PULW 811**

### **Fundamental Rights and Freedoms**

#### **Credit Hours: 3**

This course seeks to identify the essence of rights and liberties in the Qatari constitutional system and other comparative constitutional systems. It addresses the various rights and freedoms protected on both national and international level, the regulating authority and its relevant powers to regulate rights and freedoms. Moreover, the course highlights the constitutional and judicial guarantees incorporated into the constitutional text against any potential attempts to diminish or restrict the free enjoyment of public rights and freedoms. Finally, this course underscores the intersection between the public rights and freedoms and other constitutional principles that may burden those rights and freedoms. And finally examines a number of judicial precedents that have safeguarded rights and liberties in ordinary and exceptional circumstances.

## **PULW 812**

### **Administrative Contracts**

#### **Credit Hours: 3**

The Public Procurement course offers an inductive and analytic study of tenders and biddings law (Procurement Law) No.26 of 2005 in comparison to foreign laws. This course introduces methods of contracting through public (general), private (limited) and local tenders. It also reviews the other methods of concluding administrative contracts such as the direct procurement and practice. It further examines types of administrative contracts and their contemporary applications. In addition to studying the provisions regulating tenders and analyzing the rights and duties of the contracting parties, provisions relating to the Central Tenders Committee as well as other committees will be examined. The course then highlights the administrative dispute resolution mechanisms through the domestic courts or arbitration.

## **PULW 813**

### **Cyber Crimes**

#### **Credit Hours: 3**

This Course provides an advanced analytical study of one of the most significant contemporary crimes, that is Cyber Crimes. In general, the Course seeks to highlight the specific policies adopted by the Qatari and comparative legislations in combating this type of crimes. The Course also offers an analytical study of several Cyber Crimes that involve criminal acts committed using a computer or/and a network, for instance; online piracy, credit card fraud, electronic forgery, databases destruction, cyber terrorism, electronic interception, cyber fraud, and illegal use of information technologies. This Course, furthermore, studies and analyses the Qatari and comparative case law that pertains to Cyber Crimes, and identifies different entities which endeavour to fight this type of crimes.

## **PULW 814**

### **Cross-Border Organized Crimes**

#### **Credit Hours: 3**

This Course tackles one of the cross-border organized crimes, such as; Drug trafficking, Human trafficking, terrorist crimes, as they are defined under the Qatari relevant laws and as compared with the most relevant international and regional treaties. The Course also seeks to identify the criminal institutions with jurisdiction over such crimes in Qatar and how to effectively combat these crimes through international and regional cooperation between relevant law enforcement institutions.

## **PULW 815**

### **The Lew of International Responsibility**

#### **Credit Hours: 3**

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the subjects of international law in cases where a breach of law occurs. A particular focus on the work of the International Law Commission. It provides detailed discussion and analysis of the historically predominant topics of State responsibility. It also covers both the topic of responsibility of international organizations, on which the ILC's work is ongoing (a set of draft Articles having been adopted on first reading in 2009), and that of liability for harmful activities not prohibited under international law on which the ILC adopted drafts in 2001 and 2006.

## **PULW 816**

### **Peacefu Settlement of Inter-State Disputes**

#### **Credit Hours: 3**

The aim of this course is the study of the judicial settlement of inter-State disputes, with particular focus on the International Court of Justice. The course covers matters of jurisdiction as well as procedural issues, such as preliminary objections, non-appearance, provisional measures, counter-claims and third-party intervention. The scope of the Court's judgment in a given case and the possibility of its interpretation and revision are also covered. Participants will develop both their theoretical and practical skills. The diplomatic settlement of disputes, such as negotiation, mediation good offices shall be deciphered in line with the available political settlement available particularly under the UN charter. Arbitration with special focus on some recent cases shall also be covered together with the available judicial settlement mechanisms with special concern of some recent cases that has relevance to the gulf states, such as the ICJ judgment as per Hiwar case (Qatar V Bahrain)..

## **SPED 520**

### **Assessment in Special Education**

#### **Credit Hours: 3**

Formal and informal assessment strategies used in the identification and service of students with disabilities are described in this course. Technical and operational aspects of standardized testing, curriculum based assessment, and informal strategies are also described. This course has a field-based component.

## **SPED 521**

### **Methods and Materials in Special Education**

#### **Credit Hours: 3**

This course focuses on the instructional skills necessary for teaching students with high incidence disabilities (LD, E/BD, and ID) who receive special education services. Topics of primary emphasis include, developing effective individualized education plans; preparing and delivering exemplary lesson plans; and identifying instructional strategies that promote effective classroom learning. Research-based methodology is emphasized. This course has a field-based component.

## **SPED 522**

### **Applied Behavior Analysis**

#### **Credit Hours: 3**

This course focuses on the basic principles and procedures of applied behavior analysis; on identification of factors that contribute to behavioral problems and improved performance; and on procedures that can be used to minimize behavioral problems, improve performance, teach new behaviors, and increase probability of behaviors occurring under appropriate circumstances. This course has a field-based component.

## **SPED 523**

### **Collaboration and Partnership**

#### **Credit Hours: 3**

This course will focus on methods for collaboration and partnership among educational professional, families, and community, in the education of children with disabilities. The course focuses on issues such as: family centered approaches to the design of education plans and precedures, family life and expectation for children, and community responsibility towards individuala with disabilities. The course intends to develop skills necessary for addressing problems facing special persons with disabilities and their families, building partnership and shared responsibility among all partners. This course includes a field-based component.



## **SPED 524**

### **Introduction to Special Education**

#### **Credit Hours: 3**

This course provides broad knowledge and skills in special education for candidates in all teacher education programs. It mainly covers: models, theories, etiology, philosophies, legal provisions, ethical and professional commitment, assessment and identification procedures and instructional strategies for students with exceptional learning needs. It also provides knowledge of different characteristics of learners with special needs and their educational implications. This course stresses on adapting teaching strategies and differentiating instructions to meet the needs of individuals with exceptional learning needs. This course has a field-based component.

## **SPED 583**

### **Internship**

#### **Credit Hours: 9**

This field-based course provides an opportunity for students to assume the role of a Special Education teacher, while being jointly supervised by a mentor teacher and a university faculty member. Students spend four weeks working with their university instructors, preparing for their internships, and 10 weeks in the field, in a center for students with disability or a school that includes students with disabilities under the joint supervision of the university instructor and a mentor teacher. Students are also required to participate in a seminar with their university instructor; topics for the seminar include student concerns as well as instructor and mentor teacher suggestions for teaching improvements. This course requires a significant number of field hours.

## **SPED 601**

### **Issues, Policy and Practice in Special Education**

#### **Credit Hours: 3**

This course aims at examining current trends and issues related to mild/moderate disabilities. It covers philosophies, theories, legislation, and perspectives from other fields of knowledge that influence the practice in the field of special education. It emphasizes educational programs and behavioral management issues in mild/moderate disabilities.

## **SPED 602**

### **Inclusive Education for Students with Disabilities**

#### **Credit Hours: 3**

This course is designed to prepare the educator to effectively teach a range of students found in the typical general education classroom. Various disabilities are addressed in terms of their characteristics, assessment procedures, and intervention techniques that are research proven. The course prepares candidates to serve in a pre-referral process as well as during the child's eligibility for special education. Practical strategies, accommodations and modifications for students with disabilities in the general education classroom are also explored. This course has a field-based component.

## **SPED 603**

### **Advanced Applied Behavior Analysis**

#### **Credit Hours: 3**

An overview of applied behavior analysis, which is based on the discipline devoted to the understanding and improvement of human behavior, is presented. Emphasis is placed on designing procedures to systematically change socially important behaviors using single-subject research designs. This course provides the student with procedures for selecting, defining, and measuring applied behavior. Behavioral and cognitive-behavioral intervention procedures are reviewed and discussed using graphic displays and detailed descriptions of experimental procedures from published articles and the textbook. Replicating and evaluating analyses of behavior using single-subject research designs are also addressed. This course has a field-based component.

## **SPED 604**

### **Assessment of Students with Disabilities**

#### **Credit Hours: 3**

This course aims at providing the candidates with essential procedures of assessment for individuals with exceptional learning needs. It covers topics such as types of educational assessment, issues in assessing children with special needs, and skills needed to undertake assessment. Emphasis is placed on analysis of evaluation of learners work in order to prepare and apply individualized programs and activities.

## **SPED 605**

### **Collaboration with Family of Children with Disabilities**

#### **Credit Hours: 3**

This course provides candidates with knowledge of legal, social and educational aspects and their effects on children with disabilities and their families. Among topics covered are historical and current roles of parents, family characteristics, communication and consultations skills, and resources in special education. The course emphasizes school visitation, family interview, and developing skills necessary to pinpoint problems facing special needs persons and families when interacting with schools and community resources.

## **SPED 607**

### **Characteristics of Mild/Moderate Disabilities**

#### **Credit Hours: 3**

This course focuses on the characteristics of learners with high-incident disabilities including learning disabilities, emotional behavioral disorders, mild and moderate intellectual disabilities. The purpose of this course is to study the nature of these learners including the traditional categorical perspective and then move to the perspective of alternative, non-categorical frameworks. Topics include definition/ eligibility, assessment, causal factors, characteristics of various disorders, and current issues facing the field. This course has a field-based component.

## **SPED 608**

### **Characteristics of Severe/Proound Disabilities**

#### **Credit Hours: 3**

This course aims at helping prospective teachers in special education to understand definitions, identification, etiology, characteristics and impact of severe disabilities on developmental skills. It also covers legislations, rules, regulations and ethical responsibilities for teachers of those students. Major emphasis is placed on characteristics, education and medical complications as well as effective collaboration activities with other professionals and community resources. This course has a field-based component.

## **SPED 609**

### **Methods of Teaching Learners with Mild/Mod. Disabilities**

#### **Credit Hours: 3**

This course focuses on methods and materials for teaching learners with mild and moderate disabilities including behavior disorders, learning disabilities, and mild intellectual disabilities. Students learn how to plan lessons, accommodate their academic needs, and make decisions based on assessment. Students also learn how to choose service delivery models, use related services, and work effectively with families and other professionals.

## **SPED 610**

### **Methods of Teaching Learners with Sev./Pro. Disabilities**

#### **Credit Hours: 3**

This course helps candidates to gain knowledge and skills related to teaching children with severe disabilities. It covers the use of assistive devices and technological equipment appropriate for individuals with severe disabilities among other topics. It stresses coordination efforts with professionals and parents to design and implement instructional as well as behavioral management strategies to improve developmental and social skills of these students.

## **SPED 611**

### **Literacy Assessment & Remediation**

#### **Credit Hours: 3**

This course explores the nature and causes of reading disabilities, and investigates general and specific principles and approaches to diagnosis and correctional intervention. The student conducts assessment and intervention and submit actual case studies using both group and individual tests in diagnosis and correction. This course has a field-based component.

## SPED 612

### Motor Development & Learning

#### Credit Hours: 3

This course focuses on motoric, educational, and vocational supports during the lifespan of individuals with learning differences practiced in the field by professionals. Typical and atypical patterns of development influence the acquisition of skills and the mastery of necessary tasks throughout one's lifespan. Atypical patterns of motor development impact on the functional and independent skills necessary to achieve educational, vocational, and adaptive goals for students with disabilities. This course reviews fine and gross motor development of children with known or suspected disabilities and relates the differences to the acquisition and mastery of skills throughout the lifespan. Special emphasis is placed on children of school-going ages with known or suspected motor disabilities. This course has a field-based component.

## SPED 621

### Intern:Mild-Moderate Disabil

#### Credit Hours: 6

The Internship in Special Education is designed to provide the opportunity for graduate students to practice and demonstrate those planning, teaching, assessment, management, and collaboration skills that have been identified by the program as essential components of being an effective special educator. It is during this internship that candidates confirm that they have mastered those skills needed to work with learners who are in special education programs.

## SPED 622

### Internship:Sever-Profo Disabil

#### Credit Hours: 6

The Internship in Special Education is designed to provide the opportunity for graduate students to practice and demonstrate those planning, teaching, assessment, management, and collaboration skills that have been identified by the program as essential components of being an effective special educator. It is during this internship that candidates confirm that they have mastered those skills needed to work with learners who are in special education programs.

## EPSY 511

### Human Development & Learning

#### Credit Hours: 3

Human Development and Learning is an applied field of psychology that relies on a number of psychological principles and theories in order to offer a scientific explanation to the process of the teaching and learning. Among the topics that this course covers are cognitive development, language development, personal development theories, intelligence, individual differences, learning theories, motivation, classroom management, and measurement and evaluation in the school. The focus of this course is on how learning occurs and strategies that support learning (pedagogy). This course has a field-based component.

## STAT 220

### Business Statistics I

#### Credit Hours: 3

This course introduces descriptive graphical techniques and numerical measures; probability distributions and their application to stock markets, production reliability and queuing systems; sampling distributions; estimation; inference with application to market segmentation; simple linear regression and correlation with application to accounting, economics, banking and insurance.

## STAT 222

### Business Statistics II

#### Credit Hours: 3

This course examines multiple regression analysis with emphasis on model building in business and economics applied to the consumer, the firm and the markets, non-parametric statistics, time series analysis and business forecasting applied to sales, demand, revenue, consumption, share prices, exchange rates, basics of discriminate analysis and factor analysis applied to marketing research.

## STAT 501

### Mathematical Statistics

## Credit hours 3

### Lecture hours 4

Introduction to probability, random variables, expected values, moment generating function, probability distributions, probability density function. Discrete and continuous bivariate random variables. Joint, marginal and conditional distributions. Transformation techniques. Sampling distributions. The distribution of a single order statistics. The central limit theorem. Properties of the estimator. Theory of point estimation, maximum likelihood method. Moment's method. Least squares method. Comparisons between the different methods. Interval estimation, Pivotal quantities. Test of hypotheses, Deriving testing methods.

## STAT 502

### Applied Statistics Methods

#### Credit hours 3

#### Lecture hours 4

Sampling methods. Data types and measurement level. Sampling distribution. Point and interval estimation. Hypothesis testing. Nonparametric hypothesis. Pearson and Spearman correlations. Simple linear regression. Residual analysis for model adequacy. Multiple Regressions. The completely randomized design and multiple comparisons, the randomized block design and their nonparametric counterparts. Categorical data analysis. Statistical software like Minitab, SPSS R or/and SAS are used.

## STAT 611

### Probability Theory

#### Credit hours 3

#### Lecture hours 3

Probability spaces and random elements, distributions, generating and characteristic functions, conditional; Independence of events and random variables; Some useful Inequalities in Probability; expectation, convergence modes and stochastic orders, continuous mapping theorems, central limit theory and accuracy, laws of large numbers, Stability of independent random variables.

## STAT 612

### Mathematical Statistics

#### Credit hours 3

#### Lecture hours 3

Distributions (commonly used univariate and multivariate distributions, including exponential families of distributions and properties), order statistics and distributional properties, (asymptotic) unbiased estimation and the information inequality, likelihood inference for parametric statistical models (including the multi-parameter case, regular and non-regular cases), finding confidence intervals, methods of finding and evaluating tests, asymptotic confidence intervals and tests. Bayesian inference.

## STAT 613

### Applied Linear Models

#### Credit hours 3

#### Lecture hours 3

A study of the theory underlying the general linear model and general linear hypothesis. Review of Matrices and their Calculus; Multivariate normal Distribution and Quadratic Forms; General Linear Hypothesis; variance and covariance analyses; Diagnostic analysis; design of experiments; and their practical implementation with statistical packages.

## STAT 614

### Sampling Techniques

#### Credit hours 3

#### Lecture hours 3

A development of sampling theory for use in sample survey problems, sources of errors in surveys. This course provides an introduction to methods of sampling and analysing data from finite populations from both a theoretical and applied perspective. It is intended for Statistics students interested in application, as well as students in disciplines such as business, life science or social science who need sampling in their research.



### **STAT 617**

#### **Statistical Computation and Simulation**

**Credit hours 3**

**Lecture hours 3**

This course will focus on ideas of modern Monte Carlo methods, including: basic principles of computing and simulation, including generation of random numbers and random variables, and statistical tests, Markov chain Monte Carlo, and variance reduction methods. The course covers several advanced techniques and applications in statistical optimization methods (such as numerical integration and approximation, Data partition and resampling, Optimization methods, Density estimation and EM-algorithm) as well as general optimization methods.

### **STAT 621**

#### **Applied Stochastic Processes**

**Credit hours 3**

**Lecture hours 3**

Markov chains: classification, recurrence, transience, limit theory. Renewal theory, Markov processes, birth-death processes. Applications to queuing, branching, and other models in science, engineering and business. Topics drawn from semi-Markov processes, martingales, Brownian motion.

### **STAT 622 - Large Sample Theory**

**Credit hours 3**

**Lecture hours 3**

Convergence in probability, Convergence in law, Central Limit Theorem, the Delta method, Performance of Statistical Tests, Confidence intervals, Accuracy of point estimators, Comparing estimators, Nonparametric Estimation, Large Sample Likelihood Theory

### **STAT 626 - Bayesian Statistical Inference**

**Credit hours 3**

**Lecture hours 3**

Principles of Bayesian inference. Methods of Bayesian data analysis with applications in the sciences. Hierarchical and non-hierarchical models, including linear and generalized linear models. Model checking, Model selection, Model comparison. Bayesian computation including Markov Chain Monte Carlo algorithms. Applications in the sciences utilizing computer software.

### **STAT 665**

#### **Statistical Consulting**

**Credit hours 3**

**Lecture hours 3**

The goal of this course is to teach statistics students to be effective statistical consultants. This is an advanced course requiring statistical and scientific maturity. This course will provide students with the ability to effectively and accurately acquire and convey information in verbal and written presentations. The course also describes selection and use of tools and statistical methods to analyse and interpret scientific, business and medical studies.

### **STAT 678**

#### **Applied Multivariate Analysis**

**Credit hours 3**

**Lecture hours 3**

This course covers a list of classical multivariate statistical methods. The topics will include the multivariate normal distribution and the Wishart distribution; estimation and hypothesis testing; principal component analysis; Multivariate Linear Regression; MANOVA; canonical correlation analysis; discriminant analysis; clustering analysis; multidimensional scaling; Structural Equation Modelling and Path. Furthermore, the course will include the use of at least one of the known statistical packages to analyse data sets.

### **STAT 680**

#### **Special Topics**

**Credit hours 3**

**Lecture hours 3**

Possible Topics such as Smoothing Methods, Analysis of Longitudinal Data, Data Mining and Statistical Learning, Mixed Models, Theory and Methods, Resampling Methods, Functional Data Analysis, etc.

### **STAT 690**

#### **Thesis**

**Credit hours 0 to 6**

**Lecture hours 0 to 6**

This course offers students the opportunity to work on a comprehensive research project under the supervision of a faculty member. Students are expected to complete and submit their thesis report for defense

### **STAT 695**

#### **Master's Project**

**Credit hours 0 to 3**

**Lecture hours 0 to 3**

A Master's project is similar in form and content to a Master's thesis, but on a smaller scope. The project need not show original contributions to the knowledge, however it should show a familiarity with previous work in its field. Also it should demonstrate the ability to carry out research and to organize results. It must be presented in good literate style.





