



كلية العلوم الصحية
College of Health Sciences
QATAR UNIVERSITY جامعة قطر

Qatar University
Department of Biomedical Science
College of Health Sciences

Clinical Practice Manual

For

Biomedical Science Students

Fall 2018

This manual, required as a text for students enrolled in clinical practicum, is intended to serve as a guide concerning the policies and procedures of the clinical training program. Explanation and examples of requirements, formats, and information pertinent to the student's successful completion of practicum are included. If, at any time, a student is uncertain about policies or procedures, or finds requirements unclear, she is strongly encouraged to seek clarification from her supervisor, the instructor of the practicum class, or the Clinical Coordinator.

Should any change or update in this handbook be required, the Clinical Coordinator or Department Head will provide it as an addendum.

Purpose:

The purpose of this manual is to provide information about your clinical practice and to provide you some guidelines in developing your new role. Essentially, you are still a student, but with responsibilities similar to an employee. Under the guidance and supervision of a clinical coordinator and one or more clinical instructors, the Biomedical Science student is expected to meet clinical practice goals and objectives, which directly relate to the theory and practice of Biomedical Science. Thus, the practicum is an opportunity to become immersed in the clinical setting, to use your knowledge base to make decisions, to communicate and to collaborate with others in the clinical setting, and to refine your technical skills. You will be functioning as an important member of the health care team, with increased responsibility and accountability for your own decisions and actions. In other words, you're learning at the clinical site(s) is **your** responsibility but supervised by QU faculty and facilitated by a team of experienced Medical Laboratory Scientist at various levels.

Course Information:

Course Code	Course Title	Credit	Contact Hours*	Prerequisite
BIOM 491	Clinical Practice in Chemistry	3	96	BIOM 346
BIOM 492	Clinical Practice in Hematology	3	96	BIOM 451
BIOM 493	Clinical Practice in Immunology	3	96	BIOM 426

BIOM 494	Clinical Practice in Microbiology	3	96	BIOM 422
BIOM 495	Clinical Practice in Immunohematology	3	96	BIOM 452
* Actual contact hours are subject to change due to the scope of laboratory testing conducted in a given laboratory area				

Course Description:

Please refer to Clinical Practice Objectives for the respective Course Descriptions. Each course is a three-week clinical practice rotation offered during the final semester of the Biomedical Science Department.

Faculty:

The clinical affiliate has a specified clinical coordinator and clinical instructor(s) for each of the laboratory sections. Clinical instructors expect students to be prepared for each day by reviewing relevant material from on campus courses. They expect students to have a solid foundation in theory. Clinical instructors are not in a position to provide basic theory review or instruction.

Qatar university Personnel					
Rotation	Name	Office	Email	Office Phone	Mobile
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Hamad Medical Corporation Personnel					
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Goals and Objectives for Clinical Practice:

The following applies to all areas of the clinical laboratory. Specific objectives are included separately under each discipline area.

Goals:

Upon the completion of each Clinical Practice rotation, the student will be able to:

- State/recognize normal reference values for the various test procedures performed.
- Select what is needed for each test procedure performed given appropriate reagents and supplies.
- Select appropriate quality control products and specimens from supplies provided.
- Identify the proper time to collect various specimens which are sent to the laboratory.

- Apply routine and statistical calculations as necessary.
- Explain/recognize the principle and theory of the various tests performed.
- Discuss/recognize the clinical significance of test results.
- Recognize panic values and immediately report these findings to the appropriate authorized persons.
- Suggest additional tests to aid in further diagnosis of the suspected pathology after identifying abnormal results from test procedures performed.
- Identify any possible discrepancies/inconsistencies in test results when given data generated from various divisions for the clinical laboratory.
- Evaluate the validity of test results and institute proper procedures to remedy discrepancies against quality control data.
- Correlate laboratory data with other lab test results and other clinical findings.
- Evaluate multiple patient laboratory test data to take/recommend corrective action.
- Evaluate laboratory quality control data and recommend appropriate course of action.

Contact Hours:

A Practicum Schedule based on required contact hours for each individual course will be prepared for each student. Students are required to adhere to this schedule unless specified otherwise by the QU faculty and/or appropriate Clinical Coordinator/Instructor at each site. Due to complexity of testing performed at certain clinical affiliate locations, additional contact hours may be required.

Specific times for arrival and departure will be determined for each clinical area in cooperation with the clinical instructor and/or clinical coordinator and the QU faculty. The student should note that the time for arrival will vary by clinical site and rotation area.

In a typical practicum rotation, a student is required to complete 32 hours/week for 3 weeks per course for a total of 16 weeks per CP rotation:

- **Sunday, Monday, Wednesday, Thursday- 7 hours, 7:00 am to 2:00 pm**
- **Tuesday- 4 hours, 7:00 am to 11:00 am**

Teaching Methods:

Demonstration and observation of test procedures. Supervised performance of clinical tests. Problem-solving with clinical and simulated samples. Discussion and question and answer sessions.

Evaluation Methods:

Performance in clinical practice courses is evaluated in three areas:

A. Affective Performance:

The student's performance in the practicum area comprises their technical skills and also their professional attributes such as communication skills, attendance, and interaction with multiple clinical site employees, the student's affective behavior will be assessed by the clinical instructor(s) and/or clinical coordinators. The ratings and comments are designed to provide information and counseling to recognize problems and assist the student to achieve personal and professional improvements. The ratings/comments should reflect the typical actions observed.

B. Performance Tasks:

These are the laboratory tasks and skills that are detailed for each rotation and unit. The competencies are reflected in the objectives stated in the Course Section of this manual. The student must demonstrate acceptable progress and performance for these tasks in order to receive a satisfactory grade in the course. Additional tasks may be included as determined by the clinical affiliate. Students will be evaluated by clinical instructors using the following: Consistently exceeds standards, consistently meets standards, Doesn't consistently meet standards, Consistently fails to meet standards. Definitions for these are provided below.

C. Knowledge Performance:

The student must achieve a minimum of **70%** on each of 5 comprehensive Department developed final examinations. The content of the examinations are mapped against both sub-content and taxonomic level of the ASCP Medical Laboratory Scientist (MLS) examination.

In addition to final exams in Hematology, Microbiology, Chemistry, Immunohematology, and Immunology, a final on Laboratory Operations with content as listed in the ASCP Medical Laboratory Scientist Examination Content Outline will be administered.

A final exam on Urinalysis content as listed in ASCP guidelines will be administered with the Chemistry final examination.

Clinical Practice Evaluation terms:

Students will be evaluated using a 4-scale assessment as described below:

- E – Consistently Exceeds Standards/Expectations
- M – Consistently Meets Standards/Expectations
- U – Does not consistently meet Standards/Expectations
- F – Consistently Fails to Meet Standards/Expectations

Consistently Exceeds Standards /Expectations (E)

The student consistently completes the tasks and demonstrates in an outstanding way in both

quality and quantity of work and/or knowledge that surpasses other students or what would be considered as expected of a typical student. The student is viewed as an “exceptional performer” based on her knowledge, skills, and/or attitude.

Consistently Meets Standards/Expectations (M)

The student consistently completes the tasks and demonstrates in an acceptable way in both quality and quantity of work and/or knowledge that is typical of other students or what would be considered as expected of a typical student. The student is viewed as an “acceptable performer” based on her knowledge, skills, and/or attitude. Performance at this level is fully satisfactory.

Does Not Consistently Meet Standards/Expectations (U)

The student does not consistently complete the tasks and demonstrates an unacceptable way in either both quality and quantity of work and/or knowledge that is expected or what would be considered as expected of a typical student. The student is viewed as “below performance” based on her knowledge, skills, and/or attitude and thus one who still needs improvement. Performance at this level is unsatisfactory.

Consistently Fails to Meet Standards/Expectations (F)

The student consistently fails to complete the tasks and demonstrates an unacceptable way in either quality and quantity of work and/or knowledge that is expected or what would be considered as expected of a typical student. The student is viewed as “unwilling or incapable” based on her knowledge, skills, and/or attitude and thus one who did not demonstrate satisfactory improvement by the end of the clinical practice rotation.

Course Grading Criteria:

<p>P</p>	<p>To obtain a passing grade in each course the student must:</p> <ul style="list-style-type: none">○ achieve satisfactory (Exceed or Meet) performance in the technical evaluation○ achieve satisfactory (Exceed or Meet) performance on the professional attributes (affective evaluation)○ Achieve a <u>minimum of 70% on a comprehensive computer administered department developed final examination.</u>
<p>NP</p>	<ul style="list-style-type: none">○ Unsatisfactory or Fail on any specified technical competencies○ Unsatisfactory or Fail on any specified affective competencies.○ Less than 70% on the course Final examination

If a student receives unsatisfactory on any part of an affective and/or technical evaluation, a conference will be held between the clinical instructor, the clinical coordinator and the student to discuss the problem.

The determination of unsatisfactory performance, unprofessional conduct or unsafe conduct will be made by the Clinical Instructors in consultation with the QU Clinical Coordinator. A determination will be made and approved by the Department Head when or if a student will be removed from or return to clinical practice, the condition(s) for doing so, and the level of clinic practice or laboratory activity permitted. Depending on the severity of the incident(s) and/or number of prior incidents, the sanction/disciplinary action may result in dismissal from the Department; repeating the clinical practice course; mandatory clinical practice time extensions; and/or remedial instruction.

If students achieve **less than 70%** in the knowledge exam in any of the five CP courses, she will be allowed to have a reset exam one time only for each course. Schedule will be announced by the clinical coordinator after approval of Biomedical HOD in the last week of clinical rotations. Failure to achieve the required 70% in each of the knowledge exams will result in **“incomplete”** grade. Students with incomplete grade should make appointment with their instructor to have an exam in the first week of the following semester.

A student who demonstrates unsatisfactory performance in a clinical practicum course may be required to repeat one or more of the course requirement areas with the respective evaluation method, as determined by the Clinical Coordinator and/or Department Head.

Scheduling of the repeat rotation or clinical course is subject to availability of an appropriate clinical affiliate site and adequate clinical supervision. It may be necessary for the student to wait until a rotation site becomes available. The above are negative consequences which the student may incur if she does not satisfy the course cognitive, affective behavior and technical performance requirements.

Clinical practice Policies:

Scheduling and Assignment of Practicum Rotations

Practicum rotations are scheduled to assure adequate supervision, staff interaction and representative caseload. Practicum rotations (days, times and sites) are scheduled and confirmed by the Department Faculty in consultation with the Clinical Faculty. In no event is the student permitted to make her own arrangements for Practicum rotations or to change scheduled rotation days, times or sites without a prior written email request to and approval by the Clinical Coordinator and/or Department Head.

Chain of Communication

In reference to day to day laboratory queries regarding policies and procedures or other matters of concern students are encouraged to intercommunicate first with their immediate instructors followed by the Clinical Coordinator. For further clarification students are recommended to approach the Department Head at QU.

Attire/Dress Code

A clean, white full-length lab coat and an Identification card is required for all students while on

rotation. Professional attire should be worn at all times during practicum rotations. **Sandals, very high heeled shoes, long dresses and long abayas are prohibited.** Further or additional details may be provided by the Clinical laboratory coordinator. Follow the dress requirements established by the clinical site.

Attendance

1. Students must arrive on time and remain in the clinical site for 4 hours on Tuesday and 7 hours on Sunday, Monday, Wednesday and Thursday unless approved by the Clinical Instructor and/or Clinical Coordinator.
2. **Attendance each day is required.** There is no allowance for up to 25% absences without penalty. In the event of absence, the student must notify the clinical instructor as soon as possible or at least by the beginning of the scheduled work hours for the clinical site but no later than 8:00 am for each day of absence. The QU Clinical Coordinator must also be notified at the same time. Records will be kept of all hours, absences and tardiness. Additional on-site time may be required to make up for time missed.
3. **Any absent time must be made up** during the term in which the absence occurs and before a grade is recorded, unless QU Department Clinical Coordinator expressly waives this requirement and the documentation of the waiver is in writing in the student's Department file.
4. Absentee time will be made up at the site from which the student was absent and will be arranged by the clinical coordinator.
5. The QU Department Clinical Coordinator will assume absences have not been made up unless make-up time is clearly indicated on the student's worksheets, noted with the Clinical Instructor's signature.
6. **Tardiness is not permissible.** If, under certain circumstances the student expects to be late by 15 or more minutes, then he/she must contact the clinical instructor. Each unexplained and/or unacceptable incident of tardiness will be considered as ½ day absence.

Safety

Students must comply with safety requirements and universal precautions as directed by Clinical instructor and which adheres to clinical site requirements. If you need to see a doctor from an accident, please inform the clinical instructor. If an emergency arises, the clinical site will provide emergency treatment.

Universal Precautions

Hepatitis B and Human Immunodeficiency Virus (HIV) infections are significant and growing risks

for health care workers who are especially at risk for developing these diseases due to exposure to needle-sticks and splashed blood/body fluids. Hepatitis B, which infects thousands of health care workers and kills approximately 200 people each year, is preventable by immunization. Hepatitis B and HIV + status can be prevented through the consistent use of UNIVERSAL PRECAUTIONS. There is no known method to prevent the development of AIDS in HIV+ individuals. Therefore, it is mandatory that efforts be taken to prevent exposure to these diseases. Universal Precautions must be followed by students and faculty in the clinical settings. **Students are encouraged to be immunized against Hepatitis B or must sign a waiver accepting responsibility for potential consequences of not being immunized.**

Cell phones, pagers, etc.

All cell phones must be either switched off or put on silent while in the laboratory and should not be used while at the work station.

Professionalism

Students are expected to abide by the guidelines incorporated in their professional Code of Ethics, and by standards and regulations applicable to clinical laboratory practice. Students should strive to establish good working relationships with all personnel with whom they come in contact during the Practicums. Students must demonstrate responsibility in the care of equipment and materials they use and the integrity and confidentiality of specimens they process during the assigned practicum rotations. Students should seek consultation with the Clinical Faculty member at the rotation site for problems that may arise during the practicum. In the event that a problem arises that is not resolved to the satisfaction of the Clinical Faculty member or the student, consultation will take place with the student, Clinical Coordinator and the Department Head.

Department, laboratory and affiliate institution policies

Students are expected to abide by the established daily work routine and attendance schedule at the Practicum rotation site or to the schedule prepared by the Department in conjunction with Clinical Faculty. If preparation or monitoring of techniques/experiments necessarily extends attendance beyond scheduled hours, it is the student's professional duty to follow through to complete the necessary work. However, at no time is unsupervised practice or unauthorized presence in a laboratory facility permitted. Since the purpose of practicum rotations is to maximize student exposure to and competence in laboratory practice, **the use of practicum time to work on other course or department assignments (e.g. research project papers, class projects) is not permitted.** Likewise, use of practicum site laboratory computers (for email/internet searches/text messaging) or copy machines for personal reasons is not permitted.

Gifts/Gratuities

In appreciation for services rendered, patients and/or their families sometimes offer to give money or other gifts to the student clinicians. It is requested that this not be done. Students in training should not receive gratuities.

Activity Log

Each day please keep a record of your activities on a copy of the Activity Log and turn it in to the Clinical Coordinator at the conclusion of the clinical practice. Be sure to include the **number** of each procedure that you perform during the day. **Have your clinical instructor initial the entries.**

Records

Students are required to:

1. Review clinical practice evaluation form with clinical instructor during the first days of a clinical practice course.
2. Consult with the clinical instructor for the official mid-rotation evaluation at the end of the second week.
3. Keep daily records of the number and types of tests performed on the activity sheets. Have the clinical instructor initial the sheet.
4. Review the completed evaluation form with the clinical instructor, comment (if you wish) and sign at the conclusion of the scheduled clinical practice.
5. Turn in the evaluation to the respective clinical instructor, all task activity logs, evaluation forms, and any assignments at the end of each clinical practice.
6. Complete a student evaluation of your clinical practice experience and turn in to the Clinical Coordinator.

Deadlines

Throughout this manual there are various deadlines associated with requirements which are necessary before admission to the clinical practice area(s). Under no circumstances will a student who fails to meet the deadlines of specific requirements be allowed entry to the clinical practice.

Service Work

Students in the Biomedical Science Department will not receive financial remuneration for the clinical practicum experience. Students are not allowed to work as regular staff during the internship

rotation. They must be supervised at all times, and cannot work independently as part of the laboratory

staff. Working in a clinical laboratory setting outside of regular academic hours is noncompulsory.

Confidentiality

All patient and institutional information will be held in the strictest confidence at all times. The discussion of any patient information outside of the “classroom” setting is not permissible. Confidential information concerning the institution is not to be discussed with any unauthorized individuals. All students are required to update the certification via signature.

Students may be required to sign a confidentiality statement at the hospitals. Violation of this policy and/or of other hospital or laboratory policies may result in the dismissal of the student from the hospital and clinical practice course(s).

Laboratory Information System / Hospital Information System

Each facility has established policies and procedures relating to use of their respective hospital and/or laboratory information computer system. This includes the use of passwords, or code words and patient data entry. Students should adhere to the protocol as communicated by the clinical instructor and/or clinical coordinator. In some institutions, students are allowed the opportunity to learn the respective computer systems and report results under the direct supervision of the clinical instructor.

Health and Accident Liability

The student must maintain appropriate coverage via insurance or other method. If an exposure or accident does occur, notify the clinical instructor and/or clinical coordinator immediately. Each facility has established policies and protocols to adhere to in these circumstances. The student may be responsible for payment of services such as testing and prophylactic treatment.

A physical/medical examination and/or proof of vaccinations may be required by the hospital clinical sites. Students not completing these requirements prior to practicum will not be allowed to start the practicum.

Probation and Dismissal for Non-Academic Reasons

Students who do not exhibit the attitudes and skills deemed necessary to function as a professional medical technologist may be placed on probation or dismissed from the clinical site. Professional attributes for which a student may be placed on probation or dismissed include, but are not limited to, those which are starred on the Affective Behavior Evaluation Form. Thus, a student may be placed on probation and/or dismissed for acting in any unprofessional manner or violating policies and/or procedures as outlined in this Clinical Practice Manual and/or the clinical site (laboratory/hospital/healthcare facility). Examples of such unprofessional or unsafe conduct include, but are not limited to:

1. Tampering with, destruction or theft of equipment, specimens or teaching materials.
2. Verbally abusive, physically threatening or harmful behavior.
3. Falsification of documentation (laboratory or student records).
4. Gross interference with the educational process or health care services.
5. Inappropriate or unauthorized use of laboratory equipment, supplies, reagents, data, laboratory information systems, or communications systems.
6. Unsupervised clinical practice or unauthorized presence in a laboratory facility.
7. creating unnecessary risk of exposure to or harm from environmental, chemical-and/or bio-hazards.
8. Unauthorized, unreported and/or excessive absence during scheduled clinic time.
9. Non-compliance with the work rules, policies and/or procedures of the laboratory and/or institution.

Affective Objectives and Evaluations:

All students will be evaluated regarding professional/ethical behavior and organizational skills while enrolled in the Biomedical Science Department. The objectives and evaluation instrument

are shown below. The first failure to meet an affective domain objective will result in the student receiving a **verbal warning** from the instructor and an evaluation of "*Does not meet Standards*" will be given for that objective. The second failure will result in a **written warning** and an evaluation of "*Does not meet Standards*" will be given for that objective. All subsequent failures to meet the same objective will result in a **written warning** and an evaluation of "*Fails to Meet Standards*". The faculty reserves the right to immediately evaluate as "*Fails to Meet Standards*" any failure to meet an affective domain objective that is viewed as flagrant or dangerous.

The Student will demonstrate attainment of the following professional affective behavioral skills according to the qualifying descriptions:

Honesty

- Demonstrates honesty and integrity
- Accepts responsibility for own actions
- Adheres to confidentiality

Personal Interactive Skills

- Effectively communicates and cooperates with peers
- Establishes or strives toward effective rapport with peers
- Handles stress well
- Takes advantage of technological communication tools (i.e. email, Blackboard)
- Effectively and accurately submits legible handwritten documents
- Effectively communicates orally with instructors

Organization

- Accepts responsibility for cleaning up
- Demonstrates carefulness
- Strives towards better organization and efficiency

Professional Demeanor

- Adheres to safety precautions
- Strives to have a pleasant manner (attitude)
- Demonstrates interest in learning
- Demonstrates perseverance
- Demonstrates promptness and dependable attendance
- Demonstrates appropriate professional attire
- Practices good personal hygiene habits

Professional Responsibility

- Demonstrates awareness of need for accuracy and precision
- Is willing to do more than his/her share
 - Accepts instructor criticism in constructive manner