MEDICAL LABORATORY SCIENCES PROGRAM

UNIVERSITY OF CENTRAL FLORIDA

STUDENT HANDBOOK

Updated 2022

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University of Central Florida

Overview

The University of Central Florida, a member institution of the State University System, was formerly Florida Technological University. The name was changed by action of the Florida Legislature on December 6, 1978.

The University is the second largest university based on numbers of students. With more than 64,000 students, UCF is the largest university by enrollment in Florida and one of the largest universities in the nation. It has more than 12,000 employees and an operating budget of $1.5 billion.

University Goals

The University of Central Florida 5 goals as described by President Hitt:

1. Offer the best undergraduate education available in Florida
2. Achieve international prominence in key programs of graduate study and research
3. Provide international focus to our curricula and research programs
4. Become more inclusive and diverse
5. Be America's leading partnership university

The MLS program directly meets goals 1,4, and 5 through its emphasis on high-quality undergraduate education that helps the diverse population of Central Florida obtain gainful employment at affiliated hospitals and medical centers within the area and at similar facilities across the nation.

The Burnett School of Biomedical Sciences

The Burnett School of Biomedical Sciences was established in 2007 as a part of the College of Medicine. Programs leading to Bachelor of Science degrees in the School include Medical Laboratory Sciences, Biomedical Sciences, and Biotechnology. All undergraduate programs are housed at the main campus of UCF.

Graduate programs in BSBS include:

- PhD Biomedical Sciences
- MD-PhD Biomedical Sciences
- MS Biomedical Sciences (non-thesis)
    - MS Cancer Biology Track
    - MS Infectious Disease Track
    - MS Metabolic and Cardiovascular Sciences Track
    - MS Neuroscience Track
- MS Biotechnology
    - MS Biotechnology thesis
    - Professional Science Master's non-thesis (PSM) Track

As a medical laboratory scientist, you may apply for any of these graduate programs.

The Medical Laboratory Science Program

Overview

The Medical Technology Program was approved by the Board of Regents of the State of Florida in 1968 as a Bachelor of Science degree-granting program. The name of the program was changed to Medical Laboratory Sciences in 1984.

The Medical Laboratory Sciences Program began as a traditional 3 + 1 hospital-based program. In order to best serve the UCF student, accreditation for a University-based program was sought. Accreditation by the "Committee on Allied Health Education Accreditation" (CAHEA) in conjunction with the "National Accrediting Agency for Clinical Laboratory Sciences" (NAACLS) was achieved in 1982. NAACLS (5600 N. River Road, Suite 720, Rosemont, IL 60018-5119) is the current agency accrediting the program. The program is fully accredited until 2030 after a very successful reaccreditation site visit in 2019.

In the current University-based program, students accepted into the program's professional phase will receive intense didactic and laboratory experiences within medical laboratory courses on campus. This will occur in the Fall, Spring and Summer semesters of the first year in this phase of the program.

If all the courses are satisfactorily completed during this time and the student demonstrates the skills and aptitudes expected of a MLS student, the student will be assigned a clinical experience location and register for clinical courses during the Fall semester of their second year in the professional phase. Satisfactory is defined as all lecture and laboratory courses receiving a C or better grade along with maintaining a GPA of 2.5 (out of 4.0) or higher during *each* semester of the program. This clinical experience is forty hours per week most traditionally done during the day shift hours. Students will be expected to meet the scheduling requirements of the affiliate. However, the student will not be on campus during the clinical experience.

Upon completion of the clinical experience, the student will return to campus during the spring semester of the second year to complete the program's coursework. The degree in Medical Laboratory Sciences will be awarded upon satisfactory completion of all components of the curriculum, which again involves earning a grade of C or better in each laboratory and lecture course along with maintaining a GPA of at least 2.5 for each semester.

Accreditation Statement

The UCF Medical Laboratory Science Program is accredited by the National Accrediting Agency for Clinical Laboratory Science. You may contact NAACLS for more information on the web at: www.naccls.org or at 5600 N. River Road Suite 720, Rosemont, IL, 60018-2119. Telephone: 847.939.3597.

The program is also licensed as a MLS Training Program by the State of Florida.

Certification and Licensure Eligibility

Graduates of the MLS program are eligible to sit for the Medical Laboratory Scientist (MLS) examination through the American Society for Clinical Pathology (ASCP) Board of Certification. Graduates who successfully pass the national certification exam are eligible to receive a license to practice as a MLS within the State of Florida. Graduation is not contingent upon taking or passing a national certification exam or obtaining a Florida license as a MLS.

Medical Laboratory Science Program Mission Statement

The mission of the Medical Laboratory Sciences Program is to prepare students as competent, ethical, professional medical laboratory science practitioners.

Program Goals and Objectives

The goal of the Medical Laboratory Sciences Program is to prepare an individual with in-depth academic experiences that empower them with a good sense of values and sufficient experience in the technical aspects of the profession to assure performance as a competent medical laboratory scientist at career entry level.

Objectives that relate to this goal are:

1. Provide an education compatible with the philosophies of the University and with the goals and philosophies of the Burnett School of Biomedical Sciences in the College of Medicine.
2. Offer opportunities for the student to:
    a. develop skills needed to function as a competent medical laboratory scientist;
    b. interpret test data and make independent value judgments;
    c. develop an understanding of theoretical principles of procedures, instruments and applications of laboratory procedures correlating with disease states;
    d. perform quality control procedures, interpret data obtained, make independent value judgments, and take appropriate action;
    e. recognize and identify problems and take appropriate actions;
    f. monitor and evaluate laboratory safety procedures;
    g. evaluate basic and clinical research that relates to the profession of medical laboratory science;
    h. learn basic principles of education and management;
    i. function as an effective member of the health care team in providing responsible health care for the patient.
3. Encourage participation in activities of professional organizations.
4. Instill a sense of professional integrity, regarded as important as technical proficiency.
5. Develop an awareness of the need for continuing education in order to maintain competencies and to gain new technical knowledge.

Program Essential Functions

The MLS student must be able to:

1. Observe laboratory demonstrations in which biologicals (i.e. body fluids, culture materials, tissue sections, and cellular specimens) are tested for their biochemical, hematological, immunological, microbiological and histochemical components.
2. Characterize the color, odor, clarity and viscosity of biologicals, reagents or chemical reaction products.

3. Employ a clinical grade binocular microscope to discriminate among fine structural and color (hue, shading, and intensity) differences of microscopic specimens.
4. Read and comprehend text, numbers and graphs displayed in print and on a video monitor.
5. Move freely and safely about a laboratory.
6. Reach laboratory benchtops and shelves, patients lying in hospital beds or patients seated in specimen collection furniture.
7. Travel to clinical laboratory sites for practical experience.
8. Perform moderately taxing continuous physical work, often requiring prolonged sitting over several hours.
9. Perform phlebotomy, utilizing the correct equipment for venipuncture collection.
10. Utilize culture acquisition equipment to safely collect valid laboratory specimens from patients.
11. Manipulate laboratory equipment (pipettes, inoculating loops, test tubes) and adjust instruments to perform laboratory procedures.
12. Use an electronic keyboard to operate laboratory instruments and to calculate, record, evaluate and transmit laboratory information.
13. Read and comprehend technical and professional materials (textbooks, magazine and journal articles, handbooks and instruction manuals).
14. Follow verbal and written instructions in order to correctly and independently perform laboratory test procedures.
15. Direct oral communication with patients, nurses and other non-laboratory personnel.
16. Communicate orally urgent critical values to nurses and physicians via telephone.
17. Confidentially and sensitively converse with patients, and other non-laboratory personnel regarding laboratory tests.
18. Communicate both written and oral with faculty members, fellow students, staff and other health care professionals.
19. Independently prepare papers, prepare laboratory reports and take paper, computer and laboratory practical exams.
20. Possess the following skills: comprehension, measurement, mathematical calculation, reasoning, integration, analysis, comparison, self-expression and criticism.
21. Be able to exercise sufficient judgment to recognize and correct performance deviations.
22. Be able to manage the use of time and to systemize actions in order to complete professional and technical tasks within realistic constraints.
23. Possess the emotional health necessary to effectively employ intellect and exercise appropriate judgment.
24. Provide professional and technical services while experiencing the stresses of uncertainty (ambiguous test ordering, ambivalent test interpretation), emergent demands (STAT ordered tests) and a distracting environment (high noise levels, crowding, complex visual stimuli)
25. Recognize potentially hazardous materials, equipment, and situations and proceed safely in order to minimize risk of injury to patients, self, and nearby individuals.
26. Adapt to working with unpleasant biologicals.

27. Support and promote the activities of fellow students and of health care professionals. Promotion of peers helps furnish a team approach to learning, task completion, problem-solving and patient care.
28. Be honest, compassionate, ethical and responsible. The student must be forthright about errors or uncertainty. The student must be able to critically evaluate her or his own performance, accept constructive criticism, and look for ways to improve (participate in enriched educational activities). The student must be able to evaluate the performance of fellow students and tactfully offer constructive comments.

Entry-Level Competencies of Graduates

At career entry, the graduate of the University of Central Florida Medical Laboratory Sciences Program is expected to have all the capabilities indicated below:

A. Performing Analysis
   1. have in-depth knowledge of techniques, principles and instruments
   2. be able to perform simple and complex analysis, use and maintain simple and complicated instruments
   3. be able to recognize interdependency of tests
   4. have knowledge of physiological conditions affecting test results
   5. be able to interpret the clinical significance of test results
   6. be able to recognize and correct a variety of errors
   7. be ready and able to assume the responsibility and accountability for accurate results
   8. have the ability to establish and monitor quality assurance programs
   9. be able to evaluate and implement new procedures

B. Solving problems
   1. be able to recognize problems, identify the cause (technical, instrumental or physiological), determine alternatives and implement the solution where appropriate
   2. be able to prepare criteria and strategies which will be used to solve routine or anticipated problems
   3. be able to make decisions based on information, facts and concepts as well as judgment and an awareness of contributing factors

C. Organization and communication
   1. be able to maintain, supervise and determine accuracy of records
   2. be able to prepare budgets and schedules
   3. demonstrate familiarity with the use of computers in clinical facilities
   4. be able to communicate effectively both within the health care professions and with the public

D. Supervision and management
   1. be responsible for his/her own work and decisions
   2. demonstrate basic management/supervisory skills
   3. characterize personnel relations and group functions
   4. be able to evaluate procedures and equipment

E. Education
   1. be able to assist peers, or subordinates and/or teach at bench level
   2. be aware of the necessity to learn and develop skills in educational methodologies
   3. will actively participate in continuing education in order to maintain professional competency

F. Professionalism
   1. be cognizant of the attitudes, conduct and integrity required of a professional
   2. develop a pride in the profession by participating in professional activities at local, state, and national levels
   3. maintain the highest of ethical behavior in performance of job duties and discussion of patient results
   4. demonstrate sound judgement skills in interpreting lab results

Program Affective Objectives

After completion of the MLS program, the student will exhibit the following behaviors:

1. Apply a distinct body of knowledge gained from coursework
2. Profess a sense of duty to those being served
3. Demonstrate responsibility for maintaining standards of excellence
4. Commit to a strict code of ethics
5. Demonstrate recognition and esteem for fellow professionals
6. Demonstrate competency in scientific, technical, managerial and scholarly principles
7. Act according to the high standards for performance and professional conduct of the profession
8. Demonstrate strong values and beliefs
9. Demonstrate sound judgment skills in interpreting laboratory results
10. Follow through on decisions based on information, facts and concepts
11. Project an image of professionalism to include appearance, dress and confidence
12. Promote respect and high regard for all health care professionals
13. Maintain a clean, neat working area
14. Adapt to new circumstances with ease
15. Be punctual and reliable in attendance
16. Follow all policies regarding patient safety and confidentiality
17. Follow all appropriate safety policies and procedures
18. Accept constructive criticism and attempt to improve
19. Strive to be versatile in handling more than one task
20. Promote cooperative and courteous relationships with others in the work environment

Required Program of Study/Schedule

FALL—JUNIOR/***start of professional phase of MLS***

MLS 3220C 3 CLINICAL MICROSCOPY
MLS 4625 3 CLINICAL CHEMISTRY I
MLS 4625L 1 CLINICAL CHEMISTRY LAB
MLS 4430C 4 CLINICAL MICROBIOLOGY I/LAB
PCB 3233 3 IMMUNOLOGY
PCB 3233L 1 IMMUNO LAB

TOTAL 15

SPRING JUNIOR

MLS 3305 3 HEMATOLOGY
MLS 3305L 2 HEMATOLOGY LAB
MLS 4630 3 CLINICAL CHEMISTRY II
MLS 4075L 1 CLINICAL AUTOMATION LAB
MLS 4460C 5 CLINICAL MICROBIOLOGY II

TOTAL 14

SUMMER-JUNIOR

MLS 4334 3 HEMOSTASIS
MLS 4550C 5 CLINICAL IMMUNOHEM/lab

TOTAL 8

FALL--SENIOR

MLS 4830L 3 Interpretative and practical clinical chemistry
MLS 4831L 3 Intrepretive and practical Imunohematology
MLS 4832L 4 HEMATOLOGY LABORATORY PRACTICUM
MLS 4833L 3 DIAGNOSTIC MICROBIOLOGY

TOTAL 13

SPRING—SENIOR

MLS4505 3 IMMUNODIAGNOSITIC
MLS 4910 1 INTRO TO CLIN RESEARCH
MLS 3705 3 EDUCATION/MANAGEMENT
MLS 4933 1 SENIOR SEMINAR
BSC 3403C 4 QUANT BIO METHODS

TOTAL 13

TOTAL HOURS (Pre-professional credits include): 126

Program Policies and Procedures

Each student has the responsibility to read and understand the degree requirements as stated by the University and this program handbook.

Admissions Requirements

- Acceptance to the university does not necessarily constitute admission to the upper division Medical Laboratory Sciences program.
- Separate application to the limited access program should be made directly to the program in the Spring of the year admission is sought. Applications will be accepted until the class is filled.
- UCF application must also be submitted prior to program application. Acceptance to UCF is necessary before acceptance to the program can occur.
- Student must complete all general education, foreign language admissions, and program prerequisites prior to the start of the program.
- This limited access program is work-intensive and courses include clinical practice in a variety of settings. Due to this, it is strongly recommended that students be at least one-year post high school prior to applying to the program. Students with concerns or questions should contact the program to schedule an appointment with an advisor.
- All applicants must have a minimum overall GPA of 2.5, and complete all program prerequisite courses with at least a grade of "C" (2.0).
- Students must meet requirements of the Gordon Rule and take the CLAST test. Students must meet the foreign language requirement and any other State, University, or College requirements. See specific information in University catalog.

Degree Requirements

- Students who change degree programs and select this major must adopt the most current catalog.
- Students in this major are subject to the Progress Policy set by the College of Medicine for its undergraduate students. For more information, visit https://med.ucf.edu/biomed/undergraduate-programs/undergraduate-advising/
- Students should complete the General Education Program, Foreign Language Admissions and the Common Program Prerequisite Requirements before transferring within the Florida College System or State University System.
- Students should consult with a departmental advisor.
- The courses designated in sections 1 and 2 below may be taken at a Florida College System institution, and should usually be completed in the first 60 hours.
- A minimum overall GPA of 2.5 and a minimum grade of "C" (2.0) in prerequisite and major courses is required for admission to, continuation in, and graduation from the Medical Laboratory Sciences Program.
- UCF Residency Requirement: 32 hours.
- The courses designated in General Education and Common Program Prerequisites should usually be completed in the first 60 hours.

- An FDLE background check, negative drug screen, and Board of Clinical Lab Personnel trainee license are required.
- An audit is maintained on every student in the Program Office. It is the student's obligation and responsibility to review his/her file periodically with the program director in order to check on requirements and progress through the program.

Departmental Exit Requirements

- A minimum 2.5 overall GPA is required for clinical assignment.
- The degree in Medical Laboratory Sciences will be awarded upon satisfactory completion of the University's didactic component and the clinical component in affiliated hospital laboratories.
- Upon receiving the degree in Medical Laboratory Sciences, the graduate will be eligible to take a national certification examination and then qualify for State Licensure. For more information, please go to: https://apq.ucf.edu/files/Licensure-Disclosure-COM-Medical-Laboratory-Sciences-BS.pdf
- Students must earn a grade of "C" (2.0) or higher in required courses with a minimum 2.5 overall GPA for graduation.

EEO Policies

- Qualified applicants are admitted to the Medical Laboratory Sciences Program without discrimination in regard to age, creed, ethnic origin, marital status, race or sex.
- The University of Central Florida is an equal opportunity/affirmative action employer, and assures equal access to educational programs and activity opportunities without regard to race, sex, age, handicap or national origin.

Grievance/Appeal

On campus

The student should first bring the complaint to the attention of the Program Director if the problem cannot be resolved at professor level. Open communication is encouraged so that resorting to a formal written grievance will not be necessary unless the situation requires it. If there is no resolution at this level, the student may bring the complaint next to the attention of the Associate Director of the Burnett School of Biomedical Sciences. If there is still no resolution, the student may then bring the complaint to the Director of the Burnett School of Biomedical Sciences. A formal resolution of grievance may be continued through the grievance process. If the student wants to make a formal written complaint, the student must follow the procedure outlines in the GOLDEN RULE, A HANDBOOK FOR STUDENTS regarding University rules and regulations. This can be found at http://goldenrule.sdes.ucf.edu

While at the Clinical Affiliates

The student should first bring the complaint to the attention of the designated clinical coordinator at the clinical site. If the complaint cannot be resolved at that level, the student

brings it to the MLS program director's attention. The program director will make the recommendations to the clinical coordinator for changes. If the student is not satisfied with the outcome, can then make a formal complaint to the Associate Director of BSBS, then the Director, and if necessary the student can file a formal grievance through SDES (Student Development and Enrollment Services).

Advisement

Students are encouraged to see BSBS academic advising with academic progress issues. The MLS Program Director is available to assist students for registration during regular office hours. You will be given access to registration every semester as determined by the Program Director to ensure enrollment in the MLS classes. The Program Director will keep updated audits and will inform students of any changes or requirements that need to be addressed.

MLS faculty are available to assist with course objectives with their office hours posted on faculty office doors each semester. Please make appointments with faculty during these hours. If the need arises, the faculty will make every effort to accommodate students outside the posted office hours.

Students will have the opportunity to evaluate each faculty member at the end of every semester. This is highly encouraged to provide constructive feedback to MLS faculty as to their delivery of material and the students' ability to retain it.

Attendance

As a rule, please note course policies on attendance within each of your courses. Instructors reserve the right to set and enforce more stringent policies at their discretion. The following are general policies to keep in mind throughout the program. Failure to follow these policies may be documented and could lead to disciplinary action – including removal for the program.

Absences -- Lecture

Lecture is a vital component for success in the MLS program. Absences are considered a negative attribute and references from faculty will reflect against the student. The program is considered a professional program and the student will be assessed in accordance with professional standards of the medical laboratory industry.

UNEXCUSED ABSENCES are strongly discouraged and the student should not expect the faculty to help with material that has been missed. Three unexcused absences during an MLS course is considered a severe enough offense that disciplinary action can be sought - including dismissal from the program.

Absences on test days are considered unexcused absences unless documented reasons are provided. In extenuating circumstances, the student may petition the program faculty to be allowed to make up the exam but such exceptions are at the discretion of the faculty.

Absences -- Laboratory Sessions

Clinical specimens, reagents, and supplies used for laboratory exercises have a short usable life. Because of these constraints and the expense involved, NO make-up sessions will be held in the laboratory by the faculty. With faculty permission and availability of specimens and reagents, the student may be able to perform laboratory procedures missed. If, due to constraints, the lab session(s) cannot be made up, a grade of zero (0) will be given for the missed lab. However, the student will be responsible for information that would be gained from the performance and write-up of each exercise.

Absences in assigned clinical rotations are considered unexcused and will result in dismissal from the program if excessive.

Tardiness

Punctuality is the mark of a professional. Faculty can set late arrival policies. Students who do not demonstrate punctuality per those policies will have unexcused absences.

The student will be graded on punctuality critically during the clinical practicums. Therefore, it is important that good attendance habits are developed. Your future positions will require it.

MLS Grading Policies

Grading Policies for the MLS Program are those approved by the faculty of the Program as a whole. The +/- grading system will be dependent on faculty.

The Policies are as follows:

NUMERICAL AVERAGE	LETTER
90 – 100	A
80 - 89	B
70 - 79	C
UNSATISFACTORY GRADES	
60 - 69	D
68 - 0	F

Academic Performance

A minimum grade point average of 2.5 and minimum grade of C in the major courses and in prerequisite science courses is required for admission to, and continuation in the Medical Laboratory Sciences Program. In combined courses, both the laboratory and lecture portions of each course must be passed with a minimum of a "C" or better or the student will receive a non-passing grade for that course. Students who receive non-passing grades in a combined course will be required to register for the entire course again when it is reoffered.

Professional Performance

Students not meeting the Essential Functions or Programmatic policies can also be academically dismissed due to their inability to meet specific program requirements. The MLS faculty will evaluate and meet with each student prior to clinical experience to assess the behaviors and professional attributes the student has demonstrated. Students not meeting professional standards, or weak students may be asked to choose another major or retake MLS classes.

Laboratory Performance

If the student cannot perform to expected standards in the laboratory sessions, the student will be counseled to consider an alternative major.

Academic Integrity

Since this is considered a professional program the expectations of the student's behavior is critically evaluated. A student cheating on an exam or laboratory exercise does not exhibit behavior that would be conducive to handling patient data in a clinical setting. IF a student is caught cheating, copying or turning in any form of work that is not his/her own, there will be immediate action taken that will result in dismissal from the program.

Responsibilities of The Student

Social Security Number

All MLS students MUST possess a social security number in order to get a Florida State trainees license. Some clinical affiliates also require this to be shared to process the student for rotations with them.

Transportation and Availability

The MLS student MUST have the ability to relocate or have transportation to and from clinical affiliates for their clinical rotations. Students must also meet the expected schedule of the clinical affiliate.

Medical/Health Insurance Coverage

Every student MUST have proof of medical insurance before attending clinicals. Proof of medical insurance must be provided to the program director when requested.

Liability Insurance

Each Health Program subscribes to the liability insurance program provided by the State University System administered through the University and the College of Medicine.

Health Status Reports

Every student must submit the following health information to the program so it may be kept on hand and filed with student records. This material is required by clinical affiliates to sure your health is good enough to work within a clinical setting per their occupational health requirements. The minimum requirements are:

1. Updated vaccine status for*:
    a. Hepatitis B
    b. MMR
    c. TdAP (within last 10 years)
    d. Varicella (or documented history of illness)
    e. Seasonal Influenza
    f. COVID-19
2. Results of a tuberculin skin test or serum-based tuberculosis assay that demonstrate the student is not infected with tuberculosis.
3. A nine-panel drug screen

*Some facilities do allow exceptions for some vaccines. The program respects an individual's medical autonomy. However, each facility reserves the right to reject a student for not meeting their health and vaccine requirements. While the program will attempt to find a suitable alternative in these situations, this cannot be guaranteed and could impact the student's progression and ability to graduate.

Due to the nature of the samples obtained from clinical facilities, the faculty of the MLS program HIGHLY ENCOURAGE all vaccines at the start of the program – especially Hepatitis B. These vaccines can be obtained through the Student Health Center for a nominal cost. Please also note that the student health center keeps records of most of these vaccines and has requested proof (or declination) of them during your admissions process.

Other health-related documents and records may be needed at the request of the clinical affiliate. The student must provide all requested documents to be eligible to attend the clinical affiliate for their practicum experience. Clinical affiliates reserve the right to refuse a student who does not comply with the health policies.

Students are required to cover the cost of all the above health-issues.

Background Check

You will be required to obtain an OFFICIAL background check. The student must cover the cost of the background check.

Florida Trainee License

Students are responsible for applying for their Trainee License when the program director instructs them to do so. Failure to have the application submitted and license in hand by the stated deadline may result in removal from the program unless extenuating circumstances exist. Students are responsible for the cost of the training license.

Dress Code

Students will be provided a laboratory coat for the first day of class. The lab coat will stay in the MLS lab until the student attends clinical affiliates. Closed-toed shoes and long pants will be always worn in the MLS lab. Hair should also be tied back to assure it is safe around equipment used in the lab.

Students are expected to purchase scrubs with the UCF logo and Medical Laboratory Sciences embroidered on the shirts. The standard scrub color is blacktops with black pants. Flynn O'Hara is a vendor we use and information will be shared. Students can seek alternatives but should have them approved by the program director. Students are responsible for the cost.

Clinical Experience

Clinical Affiliates

Programmatic accreditation through NAACLS requires that a signed affiliation agreement be in effect for each clinical site that participates in clinical training of Medical Laboratory Science Program students. A copy of the agreements and each addendum are available in the Medical Laboratory Science office for student to review, if desired.

An important component of the agreements is on the next page and outlines the student's responsibilities at the clinical facility

Student Responsibilities

- Demonstrate and interpret the principles and theory of tests performed
- Become proficient in evaluating normal and abnormal values of tests
- Demonstrate professional conduct and communicate in a professional manner with patients, laboratory personnel and other health care providers.
- Apply the principles of safety, quality assurance, and quality control
- Demonstrate the appropriate use of automation
- Complete all assignments associated with the clinical practicum courses
- Maintain and submit copies of your various clinical check lists and evaluations. Getting these documents signed and submitted to the program director is ultimately your responsibility.
- Continue to study materials from campus lecture courses to assure appropriate grades on practicum written exams.
- Obtain a minimum grade of C for each clinical practicum.

Note that the student is expected to not only follow policies of the UCF MLS program but also of the affiliate. Failure to follow either set of policies can lead to removal from the clinical experience and possibly the program.

If issues arise while at clinical rotations, students should first report to the Laboratory Educatoin Coordinator for that site. Additinally, the student should discuss the problem/occurrence with the UCF faculty during the faculty on-site visit or immediately via provided cell phone number. These contact numbers will be given in the Clinical Practicum Orientation.

Students MUST NOT discuss patient results outside of the laboratory...CONFIDENTIALITY of PATIENT'S RESULTS must be strictly guarded....MEDICAL ETHICS MUST BE OBSERVED AT ALL TIMES. Do not casually discuss test results in the hallways of the laboratory, in elevators, dining rooms or outside the hospital

Assignment To Clinical Affiliate For Clinical Experience

Assignment to the clinical affiliates will be made with the purpose of providing the students with unbiased assignments that benefit the student's educational experience as best as possible. Please note that you may be required to relocate during this time.

If there is an unexpected change in clinical seat capacity and more students than available seats, UCF MLS students will be ranked by professional phase course GPA to determine who has priority in placement. Those with higher GPA's in the professional phase courses will be placed first. Those students not attending clinical rotations on time will be allowed to take courses in the curriculum normally taken after the clinical rotations and a placement will be provided as soon as available.

Clinical Rotation Schedule

Information pertinent to the Clinical assignment such as the days, hours and rotation schedule will be provided before the start of the clinical rotations by the assigned clinical affiliate.

The clinical affiliate you are assigned to for the clinical experience courses will have varying hours. However, you should plan on a 40-hour class time per week. The hours may and can include off-shift work as needed.

Attendance During The Clinical Rotation

The relationship between the Clinical facility and UCF depends to a large degree on the professionalism of the MLS students. Students should keep in mind that they are "guests" at the clinical site. Students who are chronically late or absent will not be allowed to continue in the program or be readmitted at another time. Problems with professional conduct such as absences will be addressed by the UCF Program Director with the student. If the situation is not corrected, the student will not be allowed to continue in the program.

Clinical Service Work Policy

The clinical affiliates have the option to employ the student in non-class time hours in support personnel positions. The employment is between the clinical affiliate and the student.

THE STUDENT IS NOT TO PERFORM ANY SERVICE WORK DURING CLINICAL TRAINING! THE STUDENT SHOULD NOTIFY THE PROGRAM DIRECTOR IMMEDIATELY IF ASKED TO DO SO.

Clinical Evaluation

Clinical performance will be evaluated using an instrument developed by the UCF faculty and the affiliate instructors; and approved by the Program Director. An updated copy of the clinical performance evaluation forms will be given to each student at the beginning of the clinical experience courses. Final evaluation will be discussed with each student at the end of each clinical rotation. Final grades are assigned by the UCF faculty after reviewing with the Clinical Instructor. The student should discuss the final grade assigned with the UCF MLS Program Director who serves as campus coordinator.

Clinical Examinations

Students will be required to take written examinations after each clinical rotation. This requires the student to not only work competently in the affiliated hospital laboratory but study the content for the discipline which they are rotating through. This combination of clinical skills and knowledge is what helps a MLS professional be successful.

To assure entry level competency, students must achieve a grade of 60% or higher on all clinical examinations. Failure to achieve a 60% of higher on the exams may result in failing the course. Remediation opportunities are at the discretion of the program director, in consultation with the program and clinical site faculty.

Graduation from the Program

Graduation from the program requires successful completion of all MLS courses, adherence to MLS program rules, and successful completion of the MLS Comprehensive Exam.

Comprehensive Exam

Upon completion of all course work, the senior student is required to take a "COMPREHENSIVE EXAMINATION" which will be a major grade component of MLS 4933 Senior Seminar. The examination is a three-hour timed exam consisting of 200 + multiple choice questions. Passing criteria constitutes a score of 60% or better. The student has two attempts to pass the exam.

A failing grade on this exam will result in a failed grade for the Senior Seminar course. This is outlined in the course syllabus. Hence the student will no longer be eligible to graduate if they fail this exam. The student will then have to retake the course to determine the eligibility date of graduation. Results of the exam and an analysis by the UCF faculty will be discussed with each student after completion to use as a guide to assist the student in preparation for the national certification examination and hence State licensure.

ASCP Board of Certification Exam

As a graduate of a NAACLS accredited program, successful completion of the UCF MLS program allows you to sit for the ASCPS Board of Certification MLS Exam. Please note that sitting for the

ASCP Board of Certification exam is highly encouraged and national certification is requirement for Florida licensure. *However, graduation from the program is not dependent upon the certification exam*.

Important Reminders

Deadlines: Fall Term – Junior Year

1. Current Vaccine records submitted to the MLS program director
    a. Vaccine records should include as much as possible of the following:
        i. Hepatitis B
        ii. MMR
        iii. TdAP (within last 10 years)
        iv. Varicella (or documented history of illness)
        v. Seasonal Influenza
        vi. COVID-19
    b. Please see notes above missing vaccines or declination of vaccines. Immune status by reports of titers can also be accepted as appropriate.

Deadlines: Spring Term – Junior Year

1. "Trainee License Application" forms.
    a. The latest form can be obtained from DOH web site and will be provided by the program director
    b. You will need a copy of your latest transcript sent to the Florida DOH via the UCF Registrar's office.
    c. A $45.00 fee is required by the state and is payable by the student.
    d. The program director will submit the license application for you to expedite the process as much as possible.
2. Criminal background check and urine drug screens
3. Record of a recent PPD or QuantiFERON®

Deadlines: Summer Term – Junior Year

1. Complete on-boarding documents for your assigned clinical site as requested by the program director
2. Provide any additional health requirements per your clinical site's requirements
3. Order scrubs for your clinical rotations

Deadlines: Spring Term – Senior Year

1. Complete the "Intent to Graduate" form and submit to the Biomedical School advising office by the emailed deadline.
2. Complete ASCP Application
    - Examination dates: week between finals and graduation.
    - Fee of $240.00 for ASCP
3. Complete transcript requests** forms to be sent to:
    - Board of Certification
    - BCLP- Florida Board of Clinical Laboratory Personnel

    Be sure to X the block for ***Hold for Degree*; This will assure that your transcripts will not be sent until your degree is conferred. The above agencies will not release your test results unless they have the transcript indicating that you have received the degree.
4. Order a cap and gown through the University Bookstore for graduation; order graduation invitations.

Professional Status

To achieve professional status as a student complete the following:

1. Understand that the future of the profession depends on students and graduates adopting certain values and beliefs
2. Develop and maintain a standard of ethics
3. Maintain academic integrity by accepting personal responsibility for one's own didactic and laboratory course work
4. Do not discuss patients or test results
5. Act as a professional by not participating in gossip, respecting others and their right to privacy
6. Participate in all continuing education opportunities both as a student and as an employee
7. Join a professional organization and be active

Laboratory Safety

Infection Control

Universal Precautions

A policy standardizing the handling of biological hazards. The concept of universal precautions was first introduced in 1987 by CDC to decrease the occupational risks to blood-borne diseases. In 1991 OSHA issued their final standard on occupational exposure to blood-borne pathogens, which mandates the use of universal precautions for protection against blood-borne pathogens. These standard mandates that each laboratory must develop an exposure control plan to include engineering controls, safe work practices, the use of protective equipment, proper waste handling and hepatitis B vaccinations. In essence treating EVERY SAMPLE as if it is infectious.

Hand-washing

Hand-washing is the #1 defense in the spread of infection. Gloves do NOT replace handwashing. Adequate handwashing requires soap, running water and least 30 seconds of friction. Handwashing before leaving the laboratory is the expected standard and faculty have the right to incorporate grading practice that mark down students grades for not following this essential practice.

Personal Protective Equipment

Gloves, Lab coats, and other session-required personal protective equipment (PPE) are a REQUIREMENT in any of the MLS laboratories. Failure to use PPE will result in you being asked to leave the laboratory.

Engineering Controls

The UCF MLS laboratory follows all requirements of the UCF Environmental Health and Safety office. Students must use appropriately provided workspaces and disposal receptacles.

Federal Regulations

"Rules, standards, and regulations set forth by Federal, State, and Local government agencies and professional organizations demand, as far as possible, safe and healthful working conditions in hospital laboratory...the use of safe laboratory procedures is not just a sensible goal, it is the law."

It is the responsibility of the laboratory staff to always remain informed and in compliance with the law.

The Occupational Safety and Health Act (OSHA) of 1970 created two agencies:

National Institute for Occupational Safety and Health (NIOSH)

- One of eight operating components of the Centers For Disease Control (CDC) which is a health agency in the Department of Health and Human Services.
- Does not regulate, issue, or enforce safety or health standards.
- Primarily engages in research to eliminate health and safety hazards of American workers.

Occupational Safety and Health Administration (OSHA)

- Promulgates and enforces safety and health standards and regulations in the workplace.
- Conducts workplace investigations and inspections to determine the status of compliance with job safety and health standards. Issues citations and proposes penalties.
- OSHA Standards
    - Divided into four (4) major categories:
        1. general industry
        2. maritime
        3. construction
        4. agriculture
- Clinical, chemical and analytic laboratories are subject to the relevant standards found within OSHA General Industry Standards and Interpretations, Volume I, Part 1910, Title 29, Code of Federal Regulations. OSHA 29 CFR 1910 -- available as OSHA Publication 2206.

Hazardous Materials

Safety Data Sheets

Information on toxic substances in your work area and can be found in the safety data sheets (SDS), provided by the product manufacturer

SDS Information Sheets

- identifies the product/agent
- lists the hazardous chemicals
- lists the physical characteristics
- gives fire and explosion data
- contains health hazard information
- gives reactivity data
- lists spill or leak procedures
- indicates if special protection is needed
- indicates medical precautions
- exposure control
- disposal guidelines
- regulatory information and considerations

Spill Response:

What to do in the event of a hazardous spill:

- do not touch
- keep people away, evacuate the area
- contain spill if small
- stop leak if you can do it without risk
- refer to MSDS for appropriate cleanup aid
- notify instructor IMMEDIATELY

Contaminated Needle Stick Injury

Infectious diseases such as Human Immunodeficiency Virus (HIV) and Hepatitis B may be transmitted via blood and/or other body fluids. Consequently, a needle stick injury or any injury that involves blood/blood-derived fluid coming into contact with broken skin or mucus membranes poses potential exposure to these diseases. Therefore, UCF students, faculty members, or staff members of the College who are likely to be exposed to needles in the course of carrying out their academic and educational programs need to be taught the proper care and handling of needles and may only use needles or other sharp equipment under appropriate supervision.

Should an injury occur from a contaminated or potentially contaminated needle, the following procedures are recommended:

Known Source

1. If on campus, notify your instructor immediately. If at clinical affiliate notify the clinical education coordinator and your program director immediately.
2. Refer person who was stuck (victim) to their supervisor or medical authorities at the facility and/or refer to University Health Service where the accident occurred for immediate care. Wound must be cleansed thoroughly. (Student must carry health care insurance.).
3. Assess the person who had been previously stuck if possible for potential risk.
4. Hepatitis profile should be drawn on client (cost to be paid by person accidently stuck unless it is the policy of the facility at which the incident occurred to cover such accidents). Permission must be obtained from client and client's physician, if involved in a health care agency.
5. Tetanus booster as needed.
6. HIV test performed and repeated at 3-, 6-, and 9-month intervals.
7. Administer hepatitis B immune globulin (HBIG) treatment after above stat blood tests, if indicated.
8. Hepatitis B vaccine should be started, after above blood stat tests, if indicated.
9. An incident report must be completed and placed on file (Worker's compensation form for University employees) This report will be on file in the Student Health Center.

Unknown Source

1. If on campus, notify your instructor immediately. If at clinical affiliate notify the clinical education coordinator and your program director immediately.
2. Refer person stuck (victim) to their medical authorities at the facility where the accident occurred for immediate care or University Health Services. Wound must be cleansed thoroughly.
3. Perform HIV test stat and repeated at 3-, 6-, and 9-month intervals.
4. If deemed by medical director, proceed with serology test for syphilis and repeat in 3 months.
5. Proceed with hepatitis profile stat.
6. Administer tetanus booster after above stat blood tests (if 5 years since last booster).
7. Administer HBIG treatment after above stat blood tests.
8. Administer Hepatitis B vaccine after above stat blood tests.
9. An incident report must be completed and placed on file.

*please note that while EXTREMELY unlikely these events can happen in the student laboratory and why we strongly encourage vaccines to Hepatitis B.

MLS Student Laboratory Safety Procedures and Policies

Students are expected to always observe the following in the laboratory even if laboratory sessions are not occurring:

1. No eating, drinking, application of cosmetics, or smoking in the laboratory.
2. No food is to be stored in the reagent/specimen refrigerators/freezers.
3. Do not ever use the ice from these refrigerators for drinks.
4. Appropriate PPE will be used at all times shall be worn at all times and left in the lab when leaving. The only exception to this is when a lecture is occurring in the laboratory space and no hazardous substances are being used.
5. Long, untied hair, loose flowing clothing, sandals, neckties, or jewelry that presents hazards must be removed. Certain religious exceptions will be made as needed.
6. SPILLS must be handled immediately using the spill response procedure above
7. Do not distract or startle another individual or indulge in practical horseplay in the laboratory.
8. Wash hands frequently, especially after handling contaminated material and before leaving the laboratory, with an antiseptic soap.
9. Tidiness, cleanliness and good housekeeping are required at all work areas. A mess is a safety hazard.
10. Unlabeled materials must not be used and will be discarded if found.
11. Do not take shortcuts or take chances with procedures, materials, or equipment. Reporting fabricated results is an act of academic dishonesty.
12. Adhere to Waste-Disposal procedures. All contaminated waste, including specimens and inoculated materials, must be disposed in the appropriate containers.
13. When in doubt about any procedure or conditions, ASK AN INSTRUCTOR before proceeding.
14. Handle all specimens as if they are contaminated.
15. Avoid putting fingers, pencils, or other objects into the mouth.
16. Needles and syringes must be discarded into proper containers.
17. Laboratory work surface should be decontaminated with a disinfectant following any spill AND at the start and completion of the laboratory session.

Student Safety Training Notification

Hazard communication standard/right-to-know law

This acknowledges that I have received training on my "Right-to-Know" under the law, regarding:

- Chemical hazards, physical hazards, and toxic substances in the workplace;
- Safe and proper use of hazardous or toxic substances;
- Explanation for protective clothing or equipment needed to work with hazardous or toxic substances;
- Emergency procedures.

Additionally, I:

- Have been instructed in how to read an MSDS and a label;
- Have been instructed where MSDS's are kept, and informed that I have access to them at all times;
- Understand the necessary precautions to be taken when working with hazardous or toxic substances;
- Was given the opportunity to ask questions and make comments during my training session.

_____ _____

STUDENT SIGNATURE DATE

_____

Print Name

Phlebotomy Consent Form

I, _____ Print name _____ have been informed the procedures below will be part of the educational experience in the Medical Laboratory Science Program. I understand that Medical Laboratory Science students perform these procedures on each other and I am willing to participate in these activities. This agreement is voluntarily executed and by signing, I so state. I will indicate my permission for each procedure by placing my initials where indicated. It is my understanding however, that this is not a binding contract and that I have the right to change my decision at a later date.

I am aware of the risks involved in being exposed to blood, blood products, and body fluids of others. It is my understanding that the program will make every attempt not to use infectious specimens and that I will not hold the program responsible.

Procedure	Initials	Date
Venipuncture	_____	____

Signature: _____

Receipt of Handbook Acknowledgement

I _____Print name_____ acknowledge the following:

- ✓ I have received and reviewed the MLS Student Handbook
- ✓ I have asked questions and have been given answers that satisfactorily address my concerns
- ✓ I fully understand the content of all stated policies
- ✓ I agree to comply with said policies
- ✓ I accept the consequences of non-compliance of said policies as outlined in the handbook.

SIGNATURE: _____

DATE: _____