Medical Laboratory Science Program

Department of Health Sciences

College of Applied Science and Technology

Illinois State University

Normal, Illinois

STUDENT HANDBOOK

Revised April 2014
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Medical Laboratory Science Profession
Medical Laboratory Science is a profession dedicated to the performance of laboratory procedures and interpretations of data. Medical Laboratory Scientists work in a variety of venues including: hospitals, clinics, research facilities, and public health laboratories.

Medical Laboratory Science Program Overview
The program is committed to the students, the faculty, the college, the university, the affiliates, associated communities of interest and the professional practice of medical laboratory science. The program strives toward these goals through the following activities:

- Developing curricula and learning experiences which assure graduates who are technically competent and compassionate practitioners
- Providing broadly educated and competent graduates for a variety of service locations, including clinical laboratories in hospitals, clinics, research, public health, industry and biotechnology.
- Establishing and maintaining mutually beneficial affiliations that provide modern, safe, and student friendly sites for students' professional practice experiences.
- Offering quality continuing education programs and experiences for both program and affiliated faculty.
- Designing and implementing evaluation procedures that promote professional growth and development for program and affiliated faculty.
- Contributing to the scholarship in the Medical laboratory science profession through both disciplinary specific and interdisciplinary research goals.
- Collaborating with other professionals to evolve the role of the Medical laboratory scientist.
- Advocating for the Medical laboratory scientist, the work they perform and the contributions they make.
- Assuring full accreditation and satisfactory performance on graduate certification examinations.

The program is housed within the Department of Health Sciences in the College of Applied Science and Technology (CAST). The program mission flows from the mission of CAST “to provide high quality educational programs which emphasize the relationship between theory and practice.” These statements reflect Illinois State University’s commitment to “promote the highest academic standards in our teaching, our scholarship and the connections we build between them.”

The current program supports a four year integrated curriculum, providing students the opportunity to declare Medical laboratory science as a major in the freshman year. The first two years students focus on general education and prerequisite science courses. The junior year of study includes nineteen hours of introductory Medical Laboratory Science courses including: hematology, hemostasis, clinical chemistry, immunohematology, immunology, microbiology, and urinalysis.

In the senior year, students enter the professional practice phase by learning and working in affiliated clinical sites for eighteen weeks. Typically, students rotate through a minimum of six
sections of laboratory practice during the fall semester. The university program provides each affiliated site with a set of objectives, study questions, exams and evaluation tools. The affiliated sites complement the students’ experiences with individualized assessments, case studies and practical examinations. In the spring of the senior year, students take advanced on-line courses including hematology, clinical chemistry, immunohematology, microbiology, parasitology, mycology, education and management. The semester in which professional practice and on-line courses occur may be reversed if necessary in order to better accommodate the schedule of a clinical site or that of the student.

The program participates in the Illinois Articulation Initiative to provide ease of transfer for community college students. Moreover, the program maintains a flexible curriculum for those seniors who prefer to opt for a year of clinical study at a NAACLS accredited ISU affiliated Medical laboratory science program.

**Illinois State University**

Illinois State University, founded in 1857, is the first public institution of higher education established in Illinois. It is a dynamic multipurpose university whose central mission is to expand the horizons of knowledge; to transmit knowledge to students, colleagues and the general citizenry; and to enrich the culture of which it is a part. The University seeks to provide an atmosphere in which an excellent faculty interacts with capable students in and outside the classroom to produce educated citizens. In addition, the University recognizes that knowledge occurs not only in classrooms, laboratories, and libraries, but also in living units and in a rich profusion of social, recreational, and artistic activities that are provided for the students, faculty, staff, and community.

**Nondiscrimination**

Illinois State University is an Equal Opportunity/Affirmative Action institution in accordance with civil rights legislation and does not discriminate on the basis of race, religion, national origin, gender, age, disability, or other factors prohibited by law, in any of its educational programs, activities, admission or employment policies. An individual’s disabilities, however, must be judged on a case-by-case basis; some disabilities may make the practice of medical laboratory science impossible. The specific abilities are described in the Essential Functions section of this student handbook. Concerns regarding this policy should be referred to the Affirmative Action Office, Illinois State University, Normal, Illinois 61790-6901, (309-438-7657). The Title IX Coordinator and the 504 Coordinator may be contacted in these cases.

In summary, student recruitment and admission into the university and its associated programs and faculty recruitment and employment are non-discriminatory in all aspects and in keeping with Illinois State University policy and procedures.
College of Applied Science and Technology

The College of Applied Science and Technology (CAST) is composed of eight academic departments:

- Health Sciences
- Agriculture
- Criminal Justices Sciences
- Family & Consumer Sciences
- Information Technology
- Kinesiology and Recreation
- Military Science
- Technology

Department of Health Sciences

The Department of Health Sciences is an academic department established on July 1, 1979.

DEGREE AWARD

The Department offers baccalaureate degrees in five undergraduate programs:

<table>
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<tr>
<th>Program</th>
<th>Degree Award</th>
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<tbody>
<tr>
<td>Medical Laboratory Science</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Environmental Health</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Health Information Management</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Occupational Safety</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Health Education</td>
<td>Bachelor of Science in Education</td>
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</table>

Graduates of these programs are eligible to sit for appropriate national certifying examinations. However, the granting of the degree is not contingent upon the student’s passing any type of external certification or licensure examination.

The Department of Health Sciences strives to maintain 100 percent professional employment of seniors upon graduation.
DEPARTMENT VISION, MISSION AND GOALS

Our vision is to be the first choice among students, faculty and professionals with an interest in health, safety and the environment.

Our mission is to create extraordinary learning opportunities supported by ongoing scholarship and meaningful service.

Goals
1. The Department of Health Sciences will prepare undergraduate and graduate students to excel in an ever-changing environment. We will...
   1.1. Recruit qualified students, including from under-represented populations.
   1.2. Retain our students by supporting academic success and professional growth.
   1.3. Provide our students with premier learner-centered opportunities.
   1.4. Promote excellence in teaching.
   1.5. Integrate state-of-the-art technology and facilities.
   1.6. Implement an Interdisciplinary Master of Public Health degree when adequate funding is achieved.

2. The Department of Health Sciences will promote excellence in research and scholarship. We will...
   2.1. Encourage faculty to seek internal and external funding.
   2.2. Support faculty as they work to present and publish.
   2.3. Expand our reflection on the scholarship of teaching and learning (SoTL).
   2.4. Integrate state-of-the-art technology and facilities.
   2.5. Provide our students with opportunities to engage in all levels of research and scholarship.

3. The Department of Health Sciences will engage in multi-level service and outreach. We will...
   3.1. Explore opportunities to incorporate civic engagement and service learning for our students.
   3.2. Develop and maintain relationships with our alumni and other partners.
   3.3. Integrate sustainable practice into all that we do when possible.
Program Director, Faculty and Administration

PROGRAM DIRECTOR: Meridee Van Draska, MS, MLS(ASCP)\textsuperscript{CM}
Assistant Professor
Felmley Hall, Room 334
309-438-8269

UNIVERSITY FACULTY: Beverly Barham, Ph.D., MPH, MT(ASCP)
Professor
Felmley Hall, Room 328
309-438-2177

Kathryn Webster, MS, MT(ASCP)
Assistant Professor
Felmley Hall, Room 332
309-438-8810

ADMINISTRATON: Jeffery Wood, Ph.D., Dean,
College of Applied Science and Technology
Turner Hall, Room 145
309-438-7602

Jeffrey Clark, Ph. D., Chair,
Department of Health Sciences
Felmley Hall, Room 305A
309-438-8329

Program Accreditation:
The MLS program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Information can be obtained by contacting NAACLS, 5600 N. River Road, Suite 720, Rosemont, Illinois, 60018-5119, Phone: 777/714-8880. \url{http://www.jaacs.org}
Program Mission:
The mission of the Medical Laboratory Science Program is to educate qualified medical laboratory professionals. The program is dedicated to the development of knowledge, skills and professional attitudes that enable the students to design, perform, evaluate, report, interpret, correlate the results and manage laboratories in the healthcare, public health, industrial and biotechnical arenas.

Program Goals
The Medical laboratory science program at Illinois State University is a four year integrated baccalaureate degree professional program dedicated to educating qualified medical laboratory scientists. To that end, the program strives to develop and deliver curricula and learning experiences which assure graduates who are technically competent and compassionate practitioners. ISU-MLS graduates are prepared for service in a variety of arenas – clinical laboratories in hospitals, clinics, research, public health, industry and biotechnology.

ISU-MLS graduates are prepared with a rich knowledge base and with exacting technical skills to work collaboratively with other members of the health care team. Graduates can apply knowledge of chemical and biologic principles, perform analysis, interpret data, participate in research and communicate effectively with other team members.

Professional Competencies:
At entry level, the medical laboratory scientist will have basic knowledge and skills in:

A. Application of safety and governmental regulations and standards as applied to medical laboratory science;

B. Principles and practices of professional conduct and the significance of continuing professional development;

C. Communications sufficient to serve the needs of patients, the public and members of the health care team;

D. Principles and practices of administration and supervision as applied to medical laboratory science;

E. Educational methodologies and terminology sufficient to train/educate users and providers of laboratory science;

F. Principles and practices of clinical study design, implementation and dissemination of results;

G. Theoretical knowledge and technical skills in the areas of clinical chemistry, hematology/hemostasis, immunology, immunohematology/transfusion medicine, microbiology, urine and body fluid analysis and laboratory operations and the ability to integrate and interpret data
The ISU-MLS curriculum is designed with the following focus:

- Providing knowledge in the physical, chemical and biologic sciences including laboratory specialty areas of hematology, immunohematology, clinical chemistry, microbiology, urinalysis and immunology
- Developing skill in performing clinical analyses including the use of complex laboratory equipment, instrumentation and computers.
- Developing skill in interpretation and application of data to diagnosis and treatment of disease.
- Emphasizing such personal qualities as leadership, flexibility, communication, creative expression and responsibility to the health care team, patients and other clients.

The ISU-MLS program curriculum is designed within the context of the following cognitive, psychomotor, problem solving, communication, interpersonal and personal/professional skills. Students demonstrate the following:

1. **Technical Knowledge:**
   1.1 Biology – including molecular biology, immunology and genetics
   1.2 Chemistry – including biochemistry
   1.3 Mathematics
   1.4 Medical Laboratory Science Professional Body of Knowledge
      1.4.1 Clinical Chemistry
      1.4.2 Hematology
      1.4.3 Immunohematology
      1.4.4 Microbiology
      1.4.5 Immunology
      1.4.6 Hemostasis
      1.4.7 Urinalysis
      1.4.8 Laboratory Management
      1.4.9 Education

2. **Technical Skills**
   2.1 Performs complex analytical assays
   2.2 Operates, calibrates and maintains instruments
   2.3 Implements new procedures
   2.4 Adheres to established safety protocols

3. **Problem Solving Skills**
   3.1 Integrates and interprets data from several laboratory departments
   3.2 Generates and revises technical procedures, policies, position descriptions, reports, proposals and justification of purchases
   3.3 Engages in problem solving algorithms in instrument trouble shooting, analysis of quality control data and the validation of methods and procedures
   3.4 Consults with other medical personnel regarding test accuracy/precision, specificity and sensitivity
   3.5 Compares, evaluates and validates new equipment or procedures
4. Communication Skills
   4.1. Communicates with other laboratory personnel and health care team members
   4.2. Consults in a team setting
   4.3. Coordinates interdisciplinary continuing education programs

5. Interpersonal Skills
   5.1. Demonstrates respect for others
   5.2. Honors patient confidentiality
   5.3. Recognizes socio-cultural differences that may affect testing and results, laboratory personnel teaching and learning.
   5.4. Serves as a role model or mentor for others

6. Personal and Professional Skills
   6.1. Develops ethical standards that guide professional judgment and behavior
   6.2. Updates knowledge through attendance at professional workshops or conferences, in-services and reading professional journals
   6.3. Appreciates the impact of socioeconomic issues on the health care system
**Curriculum – Four Year Schedule**

The MLS curriculum includes coursework in general education, basic sciences, and extends to professional courses, including a semester in the clinical setting. A suggested schedule, showing progression through the MLS program and resulting in a baccalaureate degree is as follows:

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<th>Freshman</th>
<th>Fall Semester</th>
<th>Spring Semester</th>
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<tr>
<td>Year</td>
<td>ENG 101 (or COMM 110) (3)*</td>
<td>COMM 110 (or ENG 101) (3)</td>
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<tr>
<td></td>
<td>BSC 197 – Mol. &amp; Cell. (4)</td>
<td>Science Elective (4)</td>
</tr>
<tr>
<td></td>
<td>MAT 120</td>
<td>Gen. Ed. (3)</td>
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<td><strong>Total (14)</strong></td>
<td><strong>Total (15)</strong></td>
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<th>Fall Semester</th>
<th>Spring Semester</th>
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<tr>
<td>Year</td>
<td>CHE 220 – Organic Chemistry (5)</td>
<td>Science Elective (2-4)</td>
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<td>BSC 260 - Microbiology</td>
<td>General Education (9)</td>
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<td>General Education (6)</td>
<td><strong>Summer</strong></td>
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<td></td>
<td>Gen Ed. (3)</td>
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<td><strong>Total (13-15)</strong></td>
<td><strong>Total (14-16)</strong></td>
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<th>Junior</th>
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<td></td>
<td>General Education (3)</td>
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<td><strong>Total (14)</strong></td>
<td><strong>Total (15)</strong></td>
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<th>Fall Semester</th>
<th>Spring Semester</th>
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<tr>
<td>Year</td>
<td>Off Campus – 21 Weeks</td>
<td>On-line</td>
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<td></td>
<td>Professional Practice</td>
<td>HSC 312 – Clin. Chemistry (3)</td>
</tr>
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<td>HSC 398.22 – Biochemistry (2)</td>
<td>HSC 315 – Parasit. &amp; Myc. (2)</td>
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<td>HSC 398.23 – Serology (1)</td>
<td>HSC 316 – Res. Design (1)</td>
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<td>HSC 398.24 – UA/Body Fluids (1)</td>
<td>HSC 317 – Clin. Hematology (2)</td>
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<td>HSC 398.27 – Hematology (2)</td>
<td>HSC 318 – Clin. Microbiology(2)</td>
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<td>HSC 398.28 – Microbiology (4)</td>
<td>HSC 319 – Clin. Immunohem. (3)</td>
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<td>HSC 398.29 – Immunohemat. (2)</td>
<td>HSC 325 – Laboratory Education/Management (2)</td>
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<td><strong>Total (12)</strong></td>
<td><strong>Total (15)</strong></td>
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*Number of semester credit hours in parentheses*
Admission Procedures and Criteria –
Academic and Non-Academic

Students meeting the requirements of admission to Illinois State University may choose the Medical Laboratory Science Program as freshman. Any student in good standing within the University may choose Medical Laboratory Science as a major.

The admission standards are published in the ISU Undergraduate Catalog. Entering freshmen are required to complete four years of English, three years of mathematics, two years of social studies, two years of laboratory science, two years of foreign language or fine arts and two years of electives. ACT/SAT, high school grade point average, class rank and a personal statement are required for admission to the University. These criteria may be reviewed in detail in the ISU Catalog.

MLS majors are required to maintain a 2.5 GPA once they are enrolled in the program. Failure for two semesters to do so will result in the student being dropped from the major. Students must earn a C or better in all required courses. Students may retake any course in which they earn a D or F but the credit hours for that course will count only once toward meeting the hourly requirements for graduation. The course must be repeated at ISU.

During the semester of clinical professional experience, student’s attendance is required. All absences must be made up at a time negotiated by the site clinical faculty and the student in addition to regularly scheduled hours. Students at clinical sites agree to abide to the site’s regulations and rules such as dress code, drug testing and safety protocols.

Tuition, Fees and Refund Policies

Costs, including tuition, fees and additional program costs are published for students in the University and program publications. Academic credits earned and associated with student achievements are published in the program and university publications. Up-to-date information regarding tuition, fees and related costs may be assessed at http://studentaccounts.illinoisstate.edu/ tuition/.

Policies and procedures for withdrawing from the University and consequent refund of applicable tuition and fees are detailed in the University’s Undergraduate Catalog and in the class registration directory. This information is also posted on the ISU website.
Special Rules and Regulations

In addition to adhering to the University’s Student Code of Conduct, the program expects students to follow all rules and regulations at the professional practice site.

Acceptable Conduct:

The Medical Laboratory Science Program is a professional program and expects students to conduct themselves as professionals at all times. The rules and regulations that govern acceptable academic, professional and personal conduct for medical laboratory science students who are on campus are published in the Illinois State University

[http://deanofstudents.illinoisstate.edu/students/get-help/crr/code-of-conduct.shtml](http://deanofstudents.illinoisstate.edu/students/get-help/crr/code-of-conduct.shtml)

The conduct code discusses rules regarding safety, theft, firearms, hazing, harassment, assault, dishonesty, damage to property, student identification cards as well as adherence to local, state and federal laws. Procedures for due process for students accused of violating University regulations are included in the Code of Conduct.

The Code of Conduct lists disciplinary sanctions available when a student is found guilty of a violation. Rules regarding membership and authority of the University Review Panel and Student Grievance Committee are outlined in the code. The Student Code Enforcement and Review Board (SCERB) oversee the establishment and enforcement of University policies and regulations. The policies regarding the SCERB’s activities are also found in the Code of Conduct.

Sanctions vary dependent on the severity of the infraction. Sanctions include but are not limited to: censure, probation, suspension and dismissal.

Students are required to acknowledge their understanding of the rules and regulations in the fall semester of the junior year by signing a form, which is kept in their student file in the program director’s office.

During professional practice, students are required to follow both the rules of conduct set forth by ISU as well as those of the practice site.

Unprofessional conduct or any violation of rules, regulations or policies of the University, MLS Program or affiliated clinical sites may result in dismissal from the Program. Students at clinical sites must conform to the site’s regulations, including dress code and drug testing. The Program is not obligated to find a student an alternate professional practice site should they be dismissed from professional practice for unprofessional conduct.
Health and Safety

Illinois State University Student Health Services (SHS) provides students with routine health care needs. Students who register for at least 1 credit hour and pay the SHS fee may utilize the facilities and services provided. SHS is a fully accredited health clinic staffed by licensed physicians, nurse practitioners and physicians’ assistants. SHS also provides diagnostic laboratory, radiology, pharmacy and allergy/immunization services. Students with illnesses or injuries requiring specialized care beyond the scope of SHS are referred to local specialists and hospitals. Students are encouraged to use SHS or one of several local walk-in clinics whenever possible but in an emergency, students can seek treatment at the emergency room of either of the local hospitals, Advocate BroMenn Medical Center or OSF-Saint Joseph’s Medical Center. If necessary, students or faculty may call 911 for ambulance transportation to the hospital. Students are informed of SHS services at their campus orientation sessions.

The University also provides Student Health and Accident Insurance. Students registered for nine or more credit hours during the fall or spring semesters or six or more hours in the summer are automatically charged for and covered by the policy. Students enrolled for less than the required number of hours may purchase coverage. Students have the option of waiving coverage and they are reimbursed the fees paid. The policy has a $50 annual deductible, $1000 annual Stop Loss provision and a 1 million dollar lifetime maximum. The policy provides coverage worldwide, so students participating in professional practice, internships, student teaching or other off-campus activities can use the insurance to cover health services provided at that location. However students are advised that the Student Health Insurance will not cover emergency room charges for treatment of non-emergency illnesses. MLS students review the terms of their health insurance coverage and how to use it off-campus prior to leaving for professional practice.

In the first session of each of our introductory laboratory classes the students are given a safety orientation. Students complete MediaLab, Inc. modules and participate in class discussion regarding personal protective equipment, safe handling of blood and other body fluids, proper waste disposable, etc. Students are provided with goggles, gloves and lab coats and are not allowed to participate in lab without them.

Students are informed of the hepatitis vaccine and asked to sign a waiver indicating their immunization status, they may opt not to be vaccinated at this time. Students are required to be vaccinated before beginning professional practice.

If a student is injured in lab he or she must fill out an accident report and report to Student Health Services for further evaluation.

Students also participate in a phlebotomy orientation. The students must show proficiency in phlebotomy through practice on model arms. Faculty members closely supervise all phlebotomy sessions.
Advisement

University College Academic Advisors advise all students who have less than 24 credit hours earned, with the exception of those students participating in the Honors Program. Students will meet with their academic advisor at least twice during the freshman year. The purpose of an advising appointment is to discuss the student’s experiences at Illinois State and establish goals, both academic and non-academic. Advisors may make suggestions and referrals to other offices on campus. For example, if a student is interested in tutoring for a class, the advisor can help the student explore the available options. Advisors frequently use Illinois State University e-mail with students, communicating important updates, deadlines, requirements, requests, and changes. Students are responsible for checking their ilstu.edu account on a daily basis. Students may call (309) 438-7604 to schedule an appointment. Walk-in hours are also available; see http://universitycollege.illinoisstate.edu/advising/freshmen/ for walk-in times.

Beginning the sophomore year, student advisement shifts to the Department of Health Sciences. The Department employs a full-time academic advisor. The academic advisor is an experienced professional with expertise in understanding and applying university and programmatic requirements, interpreting university policies, utilizing resources, and working specifically with students in the Health Sciences programs. Departmental advisement is a partnership. The advisor will serve as a guide to the expectations and requirements for a Bachelor's degree in MLS, act as an advocate to access resources on campus and encourage students to develop to their full potential as a young professional. Students are responsible for managing their own learning, setting and assessing educational goals and actively taking part in advising activities. Students may call (309) 438-8329 to schedule an appointment. They may also contact the advisor via email, aaalmed@ilstu.edu.

Appeal Procedures

The MLS program and the Health Sciences Department adhere to Illinois State University’s policies and procedures for handling grievances. The program’s policies require that the student first attempt to resolve the problem directly with the source. If that fails, the student is directed to make an appointment with the Chair of the Health Sciences Department. If the problem cannot be resolved at this level, the student may take the complaint to the Dean of the College of Applied Science and Technology.

If a student encounters a problem during the semester of off campus professional practice, the student is directed first to contact the on-site clinical faculty. If the issue cannot be resolved, the student is to contact the ISU faculty member assigned to that site. If that fails, the student is to make an appointment with the Chair of the Health Sciences Department.
Essential Functions

(Adapted from: Essential Requirements for Medical Laboratory Science by Fiorella and Murphy, Clinical Laboratory Science, Vol. 9, No.1, Jan/Feb, 1996)

The Medical Laboratory Science Student must be able to:

- Observe laboratory demonstrations in which biologicals are tested for their components
- Characterize the color, odor, clarity and viscosity of biologicals, reagents and chemical reaction products
- Employ a clinical grade binocular microscope to discriminate among the structural and color differences of microscopic specimens
- Perform moderately taxing continuous physical work, often requiring prolonged sitting or standing over several hours
- Follow verbal and written instructions in order to correctly and independently perform laboratory test procedures
- Be able to manage the use of time and be able to systematize actions in order to complete tasks within realistic constraints
- Recognize potentially hazardous materials, equipment and situations and proceed safely in order to minimize injury to patients, self and nearby individuals
- Adapt to working with unpleasant biologic specimens

Reviewed by the Office of Legal Counsel July 2003
PROFESSIONAL PRACTICE

The professional practice component of the Medical Laboratory Science Program is that period of time during which the student is residing off campus and is attending a University affiliated hospital or clinic.

The off-campus professional practice experience is structured to provide clinical rotations through all departments of the laboratory including microbiology, immunology, chemistry, urinalysis, blood bank and hematology. Each student is assigned to an individual rotation sequence. Students spend eight hours a day, five days a week working in the laboratory with scheduled holidays off. Students work one on one with technologists learning to operate equipment and to apply knowledge gained in prerequisite classes to practical situations.

Students enrolled at Illinois State have two professional practice options. The majority of students enroll in the Standard Track. The second option available is enrollment in an independently accredited, hospital based school of medical laboratory science or Alternative Track. Details regarding hospital based schools may be found in Appendix B of this handbook. Students in both options (Alternative Track and Standard Track) take the same courses through the fall of their junior year.

Students in the Standard Track complete an 18* week professional practice curriculum at a hospital affiliated with Illinois State’s Medical Laboratory Science Program. These affiliated hospitals have been approved by NAACLS as clinical sites as part of the University’s accreditation. Professional practice typically occurs during the fall semester of the senior year. Students must have a 2.5 GPA or above and have earned a C or better in HSC 260, 261, 262, 263 301, 302 and 308 to qualify for professional practice. Students rotate through various departments within the lab and complete a set of predetermined activities. These activities are graded and are recorded in the students’ transcripts. Students take advanced on-line courses during the spring semester. The professional practice semester and the on-line semester may be reversed depending on the availability of the clinical site.

*Note: The clinical site in consultation with the University may add additional time to the professional practice experience if the student fails to satisfactorily complete the objectives during the 18 week period. The professional practice experience will last no longer than 21 weeks in total.

Student Placement
Hospital affiliates are contracted to provide professional practice experiences for our students. However, they are under no obligation to take students for training. Every effort will be made to place all qualified students at an affiliated hospital. New affiliates may be added as needed to meet the demands of student enrollment but there is no absolute guarantee of a student being placed in a specific site. Placement decisions will be made by the University faculty in consultation with the clinical faculty.

To be eligible for professional practice, students must have a 2.5 grade point average, have earned a “C” or better in all required courses for the major, have completed all the necessary prerequisite course work and filed the appropriate application with the MLS Program Director.
Application for the professional practice begins at the end of the fall of the junior year. Students receive materials needed to prepare a professional practice application. Students should complete an application package for each affiliate at which he/she wishes to apply. The application package should include the following:

1. An up-to-date resume
2. Two recommendations using the forms provided (one reference must be from an MLS faculty member)
3. A grade release waiver

The application packets are submitted to the Program Director. The University faculty screens the applications and forwards them to professional practice sites. The staff at the sites will review the packets. Clinical sites may request interviews with the students. After the interviews, the University faculty will work together with the clinical sites to place students. Location of the assignments will be based on the number of students applying, the number of students a facility can accommodate and best interests of all students involved. Students have the right to turn down a professional practice placement; if they do so an alternate placement will be made after all other students have been placed. If a student chooses to defer to the next year, he/she will receive no preferential treatment when he/she applies again.

Additional Guidelines:
- Students may not initiate their own placement
- Students must not contact any clinical site until after he/she receives notification to do so from the MLS faculty
- Some students will be notified to make arrangements for an interview – these should be made ASAP in order to expedite the placement process

Policies and Procedures in Case of Interrupted Professional Practice
In the event of illness or other personal emergencies, the student reports to the program director, explaining the reason for the interruption of professional practice. The program director, along with the clinical faculty at the professional practice site will work together to arrange continuation at a later date. If arrangements can not be made to continue the professional practice at the original site, the program director will work with the student to find an alternative arrangement to complete professional practice.

When Professional Practice Cannot Be Guaranteed
Since its original accreditation in 1998, the Medical Laboratory Science Program at Illinois State University has had the good fortune of being able to place all eligible students in a professional practice site. The program strives to maintain an adequate number of professional practice sites to accommodate 32 students. The program is actively looking for additional sites willing participate in professional practice.

Should a student be placed for professional practice and that site withdraws from the program the following procedure would take place in the order listed:

1. The student would be offered placement in any open professional practice site.
2. Current professional practice sites would be called upon to take an additional student.
3. Clinical sites, who have expressed interest in the past, would be contacted and recruited to join the program and consider the student in question.

4. Students would be allowed to take the senior level didactic courses and enter the professional practice phase the following semester.

Immunization Requirements, TB tests and Medical Physicals

Prior to beginning the professional practice experience the student should provide the clinical site with results of a 2-step TB skin test performed within one year of the clinical start date and documentation of measles, mumps, rubella and hepatitis B immunizations. In addition, some sites now require:

1. influenza immunization
2. varicella immunization or proof of immunity through titer
3. proof of MMR & hepatitis B immunity through titer
4. physical exam within a year of beginning professional practice.

Health Insurance Requirements

The University requires all students to be covered by some form of health insurance while participating in professional practice. Students enrolled for nine credit hours or more will automatically be charged for the University’s health insurance. Students who are covered by another policy may request a waiver to exempt them from the University coverage. Students must provide the Program Director proof of health insurance coverage prior to beginning professional practice. Students may also be required to show proof of health insurance by their professional practice site.

Should circumstances arise that require students to utilize the University’s Student Health Insurance off-campus the student should adhere the following guidelines:

- Be sure to carry the Insurance ID card found on the back of the Student Health Insurance brochure. Most health providers will ask for a copy of the insurance card when you register. A copy of the insurance card may also be downloaded at the following website: [http://healthservices.illinoisstate.edu/downloads/isu_id.pdf](http://healthservices.illinoisstate.edu/downloads/isu_id.pdf).

- Find a walk-in clinic. Student Health Insurance will not cover emergency room charges for non-emergency health care. Ask the technologists at your clinical site to recommend a walk-in clinic if you cannot find one on your own.

- Ask the service provider to provide you with an itemized bill for services rendered.

- Send the itemized bill along with a completed Aetna Claim Form to the Illinois State University Office of Student Health Insurance. The Aetna Claim Form can be downloaded at the following website: [http://healthservices.illinoisstate.edu/downloads/Claim%20Form.pdf](http://healthservices.illinoisstate.edu/downloads/Claim%20Form.pdf).
Liability Insurance
Students enrolled in the clinical component at the hospital must carry liability (malpractice) insurance. As of July 1, 2004, Illinois State University will provide student enrolled in MLS professional practice courses, professional liability insurance in the amount of One Million Dollars ($1,000,000.00) per occurrence and Ten Million Dollars ($10,000,000.00) in aggregate covering acts that occur while participating in your professional practice.

Housing and Transportation
Students are responsible for providing their own housing and transportation during the professional practice component of their education.

Absences and Tardiness
During the professional practice experience, students are allowed three days of absence which are not required to be made-up. Absences may occur due to illness, death in the family, or other personal reasons. If a student is ill during his/her professional practice, he/she is expected to inform the hospital site AND the MLS Program of the absence. If the absence is planned, the student must inform the clinical site supervisor of absence before it occurs. Absences that occur without notifying the clinical supervisor are considered unexcused.

Because the professional practice experience is highly structured, students are required to make-up any time missed beyond three days. Make-up days may occur on the weekends or by extending professional practice beyond 18 weeks. Scheduling of make-up days will be made on an individual basis by the clinical coordinator at the site. Unexcused and excessive absenteeism may result in dismissal from the professional practice site.

Tardiness is defined in the policies and procedures of the professional practice site. Continued tardiness is grounds for dismissal from the professional practice site.

When unexcused absences, tardiness, or excessive absences occur, students will be given a verbal warning regarding his/her conduct. If the student’s behavior does not improve, a written warning will be issued. If the behavior continues, disciplinary action, appropriate to the infraction will ensue.

Holidays
The following are considered holidays when students are not expected to attend professional practice: Martin Luther King Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, the Friday after Thanksgiving, Christmas Day, New Years Day and the week between Christmas and New Years. A clinical rotation calendar will be provided. If a student takes additional time off, he or she will be required to make-up that time on weekends or evenings.
**Fall and Spring Breaks**

Professional practice students have the option of taking the week of fall or spring break off from the professional practice experience. The decision to take those days off must be made PRIOR to the start of the professional practice experience AND communicated to the professional practice site. If the student takes the week off, those days DO NOT count as part of the professional practice experience. The student may choose to work through the week of the break and finish their professional practice early.

**CPR Training**

The program requires students to obtain CPR certification prior to beginning professional practice. The certification must be specific for healthcare professionals. The student may take the training at any community college or hospital. In addition, the program will provide a class on campus. Students are responsible for the fees associated with their CPR course. Student will provide the program director with a copy of their CPR card.

**Dress Codes**

Many laboratories have established dress codes for their employees. Students participating in the professional practice experience are expected to observe the same dress code as the employees do. Students should contact the clinical coordinator at the site before they begin their professional practice experience to determine the appropriate dress.

**Patient Confidentiality**

While working in a clinical setting students will be privy to patient results and records. Medical laboratory professionals, including students, are expected maintain strict confidentiality of patient information and test results as mandated by the Health Insurance Portability and Accountability Act (HIPAA). Students are required to complete the MediaLab, Inc. module on HIPAA compliance prior to beginning professional practice. Students should print the completion certificate and be prepared to deliver the certificate to the coordinator professional practice at professional practice site. Sites may also require the student to sign a confidentiality statement. **Failure to maintain confidentiality of patient information may lead to termination of the student’s professional practice experience.**

**Drug Testing**

The Program requires all students to undergo a urine drug screen prior to their placement at a professional practice site. In addition, many hospitals require any personnel working in their facility to undergo random drug testing this includes students who participate in the professional practice experience at the site. If a student fails a drug test prior to beginning professional practice the student will not be allowed to begin professional practice. If the student fails a drug test during professional practice, the site may terminate the student’s professional practice experience. Failure of a drug test may lead to dismissal from the Program. The University and the Department of Health Sciences do not condone the use of illegal drugs.
Background Checks and Urine Drug Screens
Effective July 2012, all Medical Laboratory Science students will be required to complete criminal background checks and urine drug screens prior to applying for professional practice. Students who have been convicted of committing or attempting to commit certain crimes specified in the Health Care Worker Background Check Act (225 ILCS 46/5, et seq.) (hereinafter “the Act”) may be ineligible to continue in the Medical Laboratory Science Program. Students who do not give permission to conduct the criminal background check will not be allowed to participate in the professional practice courses in the Medical Laboratory Science Program at Illinois State University.

Policy:
The Medical Laboratory Science Program requires that all students applying for professional practice experiences complete a criminal background check and drug screen. The criminal background check and drug screen will be conducted through a company selected by the Medical Laboratory Science Program. Students will pay the cost associated with the background check process. Students receiving a positive criminal background check whose offense prohibits them from being hired by a health care employer under the Act must obtain a waiver from the Illinois Department of Public Health (IDPH) to continue in the Medical Laboratory Science program.

Procedure:
1. Prior to application to professional practice students will be provided detailed information regarding the procedure for completing this requirement.

2. Students will be required to sign a consent form (Authorization for Criminal Background Investigation and Disclosure/Consent Form) that allows a Medical Laboratory Science program representative to conduct the criminal background check and to release results of criminal background checks to clinical agencies upon their request. Failure to sign the consent and provide all necessary information shall result in the student being unable to begin Professional Practice or to progress in the Medical laboratory science program.

3. The criminal background check must be completed by the chosen company no sooner than 60 days prior to application for professional practice. Students may NOT use similar reports on file at other agencies to satisfy this requirement.

4. Background checks must be completed by the dates specified. Additional checks may be required if: 1) clinical agencies require criminal background checks more frequently or 2) the student interrupts his/her program for one semester or longer. In such cases, the student will be required to have another criminal background check. The Medical Laboratory Science Program reserves the right to require an additional background check during the curriculum at the Program’s discretion.

5. Results of Criminal Background Checks and Drug Screen must be submitted to the Medical Laboratory Science Program. Results will be confidentially maintained by the Medical Laboratory Science Program separately from academic records. Results will be maintained until the student graduates from the University, at which time they will be destroyed.
6. The student is responsible for all fees for background checks and drug screens. Costs may be subject to change and are beyond the control of the University or the Medical Laboratory Science Program.

Management of Results:
1. The Program Director or his/her designee will access the electronic report from the selected company.

2. A student whose background check results in a status of “no record” may apply for professional practice and continue in the Medical Laboratory Science program.

3. A student whose background check results in a positive history (a background check that results in a criminal history) will be notified by the Program Director or designee as soon as possible. Students may view their own results on the vendor website.

4. The Program Director or designee will meet with the student to verify whether the criminal record is valid or invalid.

5. If the student believes that a record or conviction is erroneous, the student may request a fingerprint-based background check. The student is responsible for the cost of fees for fingerprint checks. If the fingerprint check reveals no criminal convictions, the student may continue in the Medical Laboratory Science program and enroll in professional practice courses. Results must be received prior to the beginning of the professional practice semester for the student to remain enrolled.

6. If the student knows and/or the conviction is found to be valid and the offense is on the “crimes that disqualify” list from IDPH, the student will be required to secure a waiver from IDPH.

7. The student is responsible for contacting IDPH (217-782-2913) for instructions and application for waiver. The process for a waiver may take several weeks or longer. The student may not enroll in professional practice courses prior to attaining the waiver.

8. The IDPH waiver must be submitted to the Undergraduate Program Director upon receipt.
Student Work
Professional practice at the clinical sites is scheduled for 18 weeks, Monday through Friday in one semester of the senior year. Although start times may vary, students practice during the regular day shift hours. At no time are students required to perform service work unsupervised by a qualified medical laboratory scientist. In the event students are scheduled for learning activities outside the regular day time schedule of the clinical site, objectives for these experiences are provided.

The clinical site may offer the student employment outside of school hours such as evenings, weekends or holidays. It shall be the student’s choice to become an employee. At no time may a student be pressured or coerced to work outside of regular scheduled school hours nor is the clinical site obligated to employ the student during or after the professional practice experience. If a student is hired by his or her clinical site, school hours and work hours must be clearly delineated.

Phlebotomy Expectations
Because the opportunity to perform phlebotomy varies so greatly among our affiliates, the Medical Laboratory Science Program at Illinois State University does not require students to perform phlebotomy as a graded function of their professional practice. We encourage affiliates to provide students with several days of observation in phlebotomy. This could include the student spending 2-3 days in the out-patient phlebotomy area or 2-3 days shadowing a phlebotomist or a combination of the two. Students may perform phlebotomy under the supervision of a technologist, technician or trained phlebotomist. The program faculty would like the students to try drawing patients, but there is no expectation that a student perform any preset number of draws. The goal of the students’ phlebotomy experience is to gain an understanding of the pre-analytical process including: patient identification, selection of anticoagulants, specimen labeling, receipt of specimens in the laboratory, and specimen distribution.

Students should not be expected to fill in for absent phlebotomists. Students should not be required to come in early or stay late to perform phlebotomy. If an opportunity exists where an affiliate desires to hire a student as a paid phlebotomist outside his or her professional practice hours, the affiliate may do so.
Professional Practice Sites
The Medical Laboratory Science Program maintains affiliated faculty and sites for student experience in professional practice. The list may change as affiliates are added or dropped. These include the following:

Advocate – BroMenn Medical Center, Normal, Illinois
Advocate – Condell Medical Center, Libertyville, Illinois
Advocate – Christ Medical Center, Oak Lawn, Illinois
Advocate – Lutheran General, Park Ridge, Illinois
Advocate – Illinois Masonic Medical Center, Chicago, Illinois
Alverno/Presence – Core Laboratory, Hammond, Indiana
Presence - United Samaritans, Danville, Illinois
Carle Foundation Hospital, Urbana, Illinois
Decatur Memorial Hospital, Decatur, Illinois
Edward Hospital, Naperville, Illinois
Genesis Healthcare – Illini Hospital, Silvis, Illinois
Gibson Area Hospital, Gibson City, Illinois
Graham Hospital, Canton, Illinois
Holy Cross Hospital, Chicago, Illinois
Illinois Valley Community Hospital, Peru, Illinois
Memorial Medical Center, Springfield, Illinois
Morris Hospital, Morris, Illinois
OSF-Saint Mary’s Medical Center, Galesburg, Illinois
Palos Community Hospital, Palos Heights, Illinois
Perry Memorial Hospital, Princeton, Illinois
Richland Memorial Hospital, Onley, Illinois
St. Margaret’s Hospital, Spring Valley, Illinois
St. Mary’s Hospital, Decatur, Illinois
St. Mary’s Hospital, Streator, Illinois
Silver Cross Hospital, New Lennox, Illinois
SwedishAmerican Hospital, Rockford, Illinois
ON-LINE SEMESTER

The Medical Laboratory Science Program offers a semester of on-line course work. These courses are taken during the senior year in the semester opposite the professional practice experience. They cover all laboratory subject areas. Each course contains advance topics as well as some review designed to prepare students for certification. The courses are taught on-line as a convenience to students who relocate for professional practice. Courses can be taken at any location where computer access is available. Students can take the courses at their convenience; they are not locked into a traditional M-F classroom schedule.

On-line Examinations
Each course has 1-4 examinations that must be taken using Respondus Lockdown software. Lockdown prevents students from having other websites or software open during an exam. The exams are timed.

Health Insurance
The University does not automatically charge students for health insurance if they are only enrolled in on-line classes. Health insurance is available through the Student Health Insurance Office. This is the same insurance that graduating students can purchase. It covers you for one semester only. Coverage can be purchased through the MY ILLINOIS STATE portal. This coverage is offered for a limited time only (December-January for spring and April-May for summer). Health insurance coverage is essential, if you are not covered by an employer, spouse or parent. Students are reminded to apply for coverage in the allotted time period.

CERTIFICATION

Students who graduate from the Medical Laboratory Science Program are eligible to take either of two certification examinations. Certification is not a graduation requirement and it does not guarantee employment. The MLS Program encourages graduates to seek certification, but does not endorse any one exam over another. Information about these exams is available at the following websites.

American Society for Clinical Pathology Board of Certification:  http://www.ascp.org

American Medical Technologists:  http://www.amt1.com/
AGREEMENT OF UNDERSTANDING

MEDICAL LABORATORY SCIENCE PROGRAM

This confirms that I, ____________________________ (print your name) have read the Student Handbook and promise to fulfill the conditions listed therein.

Signed ______________________________

Date __________________

Return this signed page to the Program Director for your file.
ESSENTIAL REQUIREMENTS FOR
MEDICAL LABORATORY SCIENCE STUDENTS

(Adapted from: Essential Requirements for Medical Laboratory Science by Fiorella and Murphy, Clinical Laboratory Science, Vol. 9, No.1, Jan/Feb, 1996)

PLEASE sign and give this page to the Academic Advisor/Program Director for your permanent file.

The Medical Laboratory Science Student must be able to:

• Observe laboratory demonstrations in which biologicals are tested for their components

• Characterize the color, odor, clarity and viscosity of biologicals, reagents and chemical reaction products

• Employ a clinical grade binocular microscope to discriminated among the structural and color differences of microscopic specimens

• Perform moderately taxing continuous physical work, often requiring prolonged sitting or standing over several hours

• Follow verbal and written instructions in order to correctly and independently perform laboratory test procedures

• Be able to manage the use of time and be able to systematize actions in order to complete tasks within realistic constraints

• Recognize potentially hazardous materials, equipment and situations and proceed safely in order to minimize injury to patients, self and nearby individuals

• Adapt to working with unpleasant biologic specimens

This document is available in alternative formats upon request by contacting the Medical Laboratory Science Program at (309) 438-8269.

I, ____________________________do hereby confirm that I can meet the above essential requirements.

Signed _______________________________ Date __________________

Reviewed by the Office of Legal Counsel July 2003
GRADE RELEASE

MEDICAL LABORATORY SCIENCE PROGRAM

This confirms that I, _____________________________ (print your name) agree to allow the Medical Laboratory Science Faculty to send a copy of my grades for my pre-professional courses and my current GPA with my application materials to the professional practices sites.

Signed _______________________________

Date __________________________

Return this signed page to the Program Director for your file.
APPENDIX A

Medical Laboratory Science Course Descriptions and Objectives

HSC 260 Introduction to Clinical Immunohematology
Basic principles and procedures of immunohematology (blood banking). Lecture and lab.

HSC 261 Introduction to Clinical Hematology
Basic principles and procedures of hematology and body fluid analysis. Lecture and lab.

HSC 262 Introduction to Clinical Chemistry
Basic principles and procedures of clinical chemistry and urinalysis. Lecture and lab.

HSC 263 Introduction to Clinical Immunology
Basic principles and procedures of immunology and serology. Lecture and lab.

HSC 301 Introduction to Coagulation and Hemostasis
Principles and test procedures related to blood coagulation and hemostasis. Correlation of test results in disease states.

HSC 302 Introduction to Clinical Biochemistry
Theory and principles of advanced instrumentation and techniques used in reference, pharmaceutical and biotechnology laboratories as related to disease diagnosis.

HSC 308 Introduction to Clinical Microbiology
Survey of medical microbiology with emphasis on common pathogens. Included are taxonomy, identification, culture methods, procedures and antibiotic susceptibility testing. Lecture and lab.

HSC 312 Clinical Chemistry II
Concentrated laboratory instruction and theoretical applications of clinical biochemistry. Current testing procedures, method comparison, and quality assurance are studied.

HSC 315 Clinical Parasitology & Mycology
General techniques for identification of clinically significant parasites and yeast. Morphology, symptomology, and epidemiology are stressed.

HSC 316 Clinical Laboratory Science: Research Design
Research design in medical laboratory science.

HSC 317 Clinical Hematology II
Study of blood cells under normal and stress conditions. Clinical correlation of test results and disease are emphasized.

HSC 318 Clinical Microbiology II
Comprehensive medical microbiology with emphasis on characterization of less common pathogens, interpretation of clinical data and etiology.
**HSC 319 Clinical Immunohematology II**
Immunohematology theory and practice, including blood group study, compatibility testing, hemolytic disease of the newborn, blood transfusions and component preparation.

**HSC 325 Laboratory Education and Management**
Foundation concepts of education and management with emphasis on philosophies, methods and techniques for professional application with practicum.

**HSC 388.22 Professional Practice: Clinical Laboratory Science: Clinical Biochemistry**
Structured off-campus clinical laboratory experience under the guidance of qualified Clinical Laboratory Scientists. Students receive individualized training and practicum to develop professional attitudes, competencies and analytical skills.

**HSC 388.23 Professional Practice: Clinical Laboratory Science: Clinical Serology**
Structured off-campus clinical laboratory experience under the guidance of qualified Clinical Laboratory Scientists. Students receive individualized training and practicum to develop professional attitudes, competencies and analytical skills.

**HSC 388.24 Professional Practice: Clinical Laboratory Science: Clinical Urinalysis and Body Fluids**
Structured off-campus clinical laboratory experience under the guidance of qualified Medical Laboratory Scientists. Students receive individualized training and practicum to develop professional attitudes, competencies and analytical skills.

**HSC 388.27 Professional Practice: Clinical Laboratory Science: Clinical Hematology**
Structured off-campus clinical laboratory experience under the guidance of qualified Medical Laboratory Scientists. Students receive individualized training and practicum to develop professional attitudes, competencies and analytical skills.

**HSC 388.28 Professional Practice: Clinical Laboratory Science: Clinical Microbiology**
Structured off-campus clinical laboratory experience under the guidance of qualified Medical Laboratory Scientists. Students receive individualized training and practicum to develop professional attitudes, competencies and analytical skills.

**HSC 388.29 Professional Practice: Clinical Laboratory Science: Clinical Immunohematology**
Structured off-campus clinical laboratory experience under the guidance of qualified Medical Laboratory Scientists. Students receive individualized training and practicum to develop professional attitudes, competencies and analytical skills.
APPENDIX B

Alternative Track – Professional Practice at a Hospital-Based School

Students in the Medical Laboratory Science Program at Illinois State University have the option of applying to a hospital-based School of Medical Laboratory Science for professional practice (Alternative Track). These hospital-based schools are independently accredited by NAACLS. These professional practice experiences are 10-12 months in length and begin either in the summer or fall following the junior year of study.

Students will rotate through the various laboratory departments including chemistry, microbiology, hematology, immunology, urinalysis and blood bank. During each rotation, the student will work one on one with a technologist learning specimen collection requirements, test procedures, instrument operations and reporting of results. Students will also attend lectures taught by hospital personnel. Students earn 29 semester hours of University credit for the classes taken at the hospital. Students are graded on their performance in both lab and lecture. These grades are reported to the University and are recorded in the student’s transcripts. Successful completion of the 12 month professional practice allows students to graduate with a bachelors degree in Medical Laboratory Science from Illinois State University provided all other graduation requirements have been met.

If a student is interested in attending a hospital based school, he/she must obtain an application from that school. Each hospital will have its own admittance criteria and policies and procedures regarding the application process. Their admission standards may differ from those of the University. Most require a GPA of 2.5 or higher, written references, a copy of the student’s transcripts and a personal interview. Illinois State University students will be competing with students from other colleges and universities for placement in the hospital’s class. While the University faculty will assist students in the application process, we can not guarantee that a student will be admitted to a hospital-based school.

Affiliated Hospital Based Schools

<table>
<thead>
<tr>
<th>School</th>
<th>Program Director</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. John’s Hospital, Springfield, IL</td>
<td>Gilma Roncancio-Weemer, MS, MLS(ASCP)</td>
</tr>
<tr>
<td>OSF St. Francis Medical Center, Peoria, IL</td>
<td>Carol Becker, MS, MT(ASCP)</td>
</tr>
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