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Description of the Medical Laboratory Profession

The Medical Laboratory Technician is an allied health professional qualified by academics and skills training to provide quality service in the field of clinical laboratory science.

CODE OF ETHICS

THE AMERICAN SOCIETY FOR CLINICAL LABORATORY SCIENCE (ASCLS)

Preamble

The Code of Ethics of the American Society for Clinical Laboratory Science sets forth the principles and standards by which Medical Laboratory Professionals and students admitted to professional education programs practice their profession.

Duty to the Patient

Medical Laboratory Professionals' primary duty is to the patient, placing the welfare of the patient above their own needs and desires and ensuring that each patient receives the highest quality of care according to current standards of practice. High quality laboratory services are safe, effective, efficient, timely, equitable, and patient-centered. Medical Laboratory Professionals work with all patients and all patient samples without regard to disease state, ethnicity, race, religion, or sexual orientation. Medical Laboratory Professionals prevent and avoid conflicts of interest that undermine the best interests of patients.

Medical Laboratory Professionals are accountable for the quality and integrity of the laboratory services they provide. This obligation includes maintaining the highest level of individual competence as patient needs change, yet practicing within the limits of their level of practice. Medical Laboratory Professionals exercise sound judgment in all aspects of laboratory services they provide. Furthermore, Medical Laboratory Professionals safeguard p

certification programs, to uphold those qualifications in hiring practices, and to recruit and educate students in accredited programs to achieve those qualifications.

Medical Laboratory Professionals establish cooperative, honest, and respectful working relationships within the clinical laboratory and with all members of the healthcare team with the primary objective of ensuring a high standard of care for the patients they serve.

Duty to Society

As practitioners of an autonomous profession, Medical Laboratory Professionals have the responsibil Tm0 ga.1( )-4n.9Pe

Essential Requirements

A Medical Laboratory Technician performs laboratory analyses, evaluates and reports laboratory results, recognizes and solves basic laboratory problems, and assists in maintenance of the laboratory equipment and instrumentation.

To accomplish these tasks the following essential requirements must be demonstrated:

The ability to read, write, communicate verbally, and perform basic math calculations.

The ability to understand and accurately follow directions from spoken and/or written material.

The abili

Medical Laboratory Technician A.A.S. Program

Mission

The Medical Laboratory Technician Program at Lake Superior College provides quality education and technical expertise using the most recent advances and technology available. The program is designed to prepare students in entry-level occupational skills, to promote technical competency while enhancing personal development, to increase economic opportunity, and to contribute services to local, regional, and global communities. Students are educated in accordance with the guidelines established by the national certification agencies for Medical Laboratory Technicians. Upon completing the program requirements, graduates will function as entry-level Medical Laboratory Technicians as outlined by the professional role delineation.

Program Accreditation

Technicians.
To support life-long learning and self-development and to educate students in the merits of continuing professional education.
To collaborate with business organizations, industry and other higher education institutions for professional opportunities.
To commit to on-going program improvement and development through a system of self-study and assessment.
To demonstrate accountability to students and governing agencies.

Program Outcomes and Competencies

Throughout the MLT program, the students acquire various skills that prepare them for entry-level positions. The graduates of the Lake Superior College Medical Laboratory Technician program will:

1. Comply with laboratory safety and compliance procedures and policies.
2. Demonstrate knowledge of principles, operations, and maintenance of laboratory equipment and instruments.
3. Demonstrate organized work skills resulting in efficient time and material management and utilization.
4. Employ quality assurance techniques to monitor procedures, equipment, and competency.
5. Correlate laboratory findings to common disease processes.
6. Demonstrate standard specimen collection and processing practices employed in medical laboratory professions.
7. Model professional behaviors, ethics, and appearance.
8. Identify pre-analytical, analytical, and post-analytical variables that affect test accuracy and take appropriate actions.
9. Perform mathematical functions as required by laboratory procedures.
10. Perform information processing functions in the clinical laboratory.
11. Communicate verbally and in written format with colleagues and patients in a professional manner.
12. Perform a variety of diagnostic and screening test procedures according to standard operating procedures.
13. Relate basic discipline principles (hematologic, chemical, immunologic, etc.) to laboratory test procedures and test results.

Please Note: The ability to relate to people, a capacity for calm and reasoned judgment, and a demonstration of commitment to the patient are essential qualities for a M -0.01oes.

instrumentation, MLTN1410 Immunology and Serology MLTN1420 Hematology, MLTN1422 Medical Microbiology, MLTN1424 Urinalysis and Body Fluids, MLTN1426 Immunohematology, MLTN1428 Clinical Chemistry, MLTN1430 Molecular Diagnostics, MLTN2420 Special Hematology, MLTN2422 Special Medical Microbiology, MLTN2426 Special Immunohematology, MLTN2428 Special Clinical Chemistry, MLTN2444 Medical Laboratory Skill Development, MLTN2500 MLT seminar and MLTN2505 Medical Laboratory Technician Clinical Practicum.

Eleven of the technical credits are reserved for the clinical practicum which is assigned only during the third

plates) before the physician signs the physical form and before you commit to the MLT program. Be aware that using a website to test yourself is *not*

Wisconsin background study. Wisconsin background studies may be done by Allied Health and Nursing at this time but in the future will likely be completed online. Minnesota background studies including fingerprinting are applied for, and paid for, by the student. Instructions are provided on the Allied Health and Nursing blog website. There are fees associated with the background studies and these fees are collected by the state.

All students are required to pay for and complete a national criminal background study. This is also required before beginning the clinical practicum at their facility. There is a fee associated with this background study and it must be completed through the LSC approved vendor using a code provided by the Allied Health and Nursing department. Background studies done through employers or other vendors are not acceptable. Follow the instructions on the Allied Health and Nursing Blog.

If a student is disqualified from having direct patient contact as a result of the state or national background study, and this disqualification **is NOT SET ASIDE** by the Commissioner of Health, he/she will **NOT BE PERMITTED TO CONTINUE** in the Medical Laboratory Technician program. It is the **student's** responsibility to pursue the "set-aside" of any state or federal background study disqualific , , responsibility. Set asides usually take a significant amount of time. Students may be required to step out of the program until the set aside is complete.

MLT Course Schedule

Below is a detailed list of the courses and the order in which they are taken. MLT program courses *must be taken in order* unless specific arrangements have been made with the program director.

Pre-technical and pre-program work

English, math and GPA requirements must be met before beginning the program. These are detailed in the school catalog and the program guide sheet that is posted on the program website.

ALTH1410 Medical Terminology, ENGL1106 Composition I or equivalent, PSYCH1135 or equivalent, BIOL1140 Anatomy and Physiology I, CHEM1110 Aspects of Chemistry I or CHEM1210 (MLS track) and BIOL1170 Microbiology must be completed with a GPA of 2.8 or better before program admittance. This is a total of 17-19Cr depending on personal course choices. Use the program guide sheet and work with your advisor to ensure you are prepared to enter the program.

First semester after admission to the MLT program (1st Fall semester 11 credits):

- MLTN1400 Introduction to Medical Laboratory Techniques and Instrumentation (2Cr)
- MLTN1574 Collection Skills (1cr) 8 week course
- MLTN1410 Immunology and Serology (3Cr)
- MLTN1424 Urinalysis and Body Fluids (2Cr)
- BIOL1141 Anatomy and Physiology II (4Cr)

Second semester of the MLT program (1st Spring semester 12-14credits):

- ALTH1440 Medical Ethics and the Law (1Cr) or PHIL1130 Ethics (3Cr) (MLS track)
- MLTN1420 Hematology (3Cr)
- MLTN1422 Medical Microbiology (3Cr)
- MLTN1426 Immunohematology (2Cr)
- MLTN1428 Clinical Chemistry (2Cr)
- MLTN1430 Molecular Diagnostics (1Cr)

Third semester of the MLT program (2nd Fall 12 credits):

- MLTN2420 Special Hematology (3Cr)
- MLTN2422 Special Medical Microbiology (2Cr)
- MLTN2426 Special Immunohematology (2Cr)
- MLTN2428 Special Clinical Chemistry (3Cr)
- MLTN2444 Medical Laboratory Skill Development (2Cr)

Fourth Semester (2nd Spring, 12 credits):

- MLTN2500 Medical Laboratory Technician Seminar (1Cr)
- MLTN2505 Clinical Practicum I (11Cr)

TOTAL CREDITS 65

NOTE: MLT coursework is not offered during the summer sessions. However, due to potential scheduling difficulties, students should be prepared to occasionally have clinical practicum rotations in the summer. While both the college and clinical sites try to avoid this, sometimes it is necessary to ensure that all students have adequate time in rotation at the clinical sites.

Courses in the MLT program may only be taken by students formally admitted to the MLT program. They may not be taken out of order.

Teach Out Plan

Orderly Academic program shutdown or suspension

In the event that the administration of Lake Superior College or Minnesota State should decide to discontinue the MLT program, every effort will be made to follow the following teach out plan:

1. No new students will be admitted to the program
2. All students currently participating in the program will be allowed to finish
3. Only courses needed for the completing students will be offered
4. Students may decide to transfer to another MLT program. Acceptance of any coursework completed at LSC will be up to the accepting institution.
5. Students may choose to leave the MLT program.

Example: Administration decides in February 2019 to close the MLT program.

- Second year students are participating in clinical practicum at this time. Students participating at clinical sites will complete their clinical work, seminar course and be allowed to graduate.
- First year students are in second semester courses at this point. Students will be able to finish the courses in progress. They will be offered courses for fall of 2019 according to the program planner.
- Only second year courses will be offered.
- No first year courses will be offered fall 2019.
- Clinical practicum will also be arranged for spring of 2020 and the students allowed to complete their degree and graduate.
- Students who do not pass classes during this second semester spring of 2019 will need to leave the program as no three year option will be offered.

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on their website at http://www.lsc.edu/policies/3-36-1-procedure-academic-programs/

Emergency Shutdown plan

In the event that an emergency occurs, such that, Lake Superior College deems that the campus must be closed, or the MLT lab specifically must be closed, immediately on an emergency basis for an indeterminate amount of time, for any reason, the following plan will be put into place:

1. If lecture rooms are not available, MLT lectures will be converted to online delivery.
2. MLT laboratory sessions will be moved to an appropriate Minnesota State affiliate.

Associated Program Costs and Fees for MN residents (updated February 2020):

- Application fee to LSC ($20.00 but currently waived): $0.00
- Application fee to MLT program $0.00
- Tuition per credit $160.89
- Online per credit $187.70

Fees are per credit, per semester

- MLT program tuition differential $49.64/credit
- Access fee (parking): $5.00/credit + tax
- Student Activity fee: $7.61/credit
- Student Association fee: $0.35/credit
- Athletic fee: $2.88/credit
- Technology fee: $10.00/credit
- Textbooks: (approximately) $1000.00

Other costs to be aware of for Allied Health and Nursing:

- Background studies (may change as LSC does not set these fees): MN $51.50, WI $10.00 National $65-$200+ (varies based on number of names and states)
- Physical examination/Immunizations: Based on your insurance
- Hepatitis B Immunization:

difficulty successfully completing courses, developing technical skills, finding employment in the field, and keeping a job after graduation. Students displaying poor soft skills, including lack of empathy for other students or for patients will be asked to leave the program.

Electronic Requirements and Academic Honesty

Students should review the LSC policy and individual course syllabi regarding academic honesty, intellectual property and the use of electronics and social media on campus, off campus and in classrooms. Course information, including answers to quizzes, tests, worksheets and all other

Affective Evaluations

Faculty will provide oral and written feedback to students regarding professional behaviors observed. Copies of written feedback will be placed in the student's file. Students not demonstrating an appropriate level of professional behavior will be asked to develop a plan for improvement along with a contract indicating what behaviors need to be addressed and within what time- period.

Promptness and Attendance

Students are expected to be on time for academic lectures, labs, and educational experiences held either on or off campus. **Being on time includes being IN THE APPROPRIATE ATTIRE (in the lab or lecture) at the START of the lecture or lab class (worksite disinfected, work station inventory completed and ready to work). This will require you to arrive 10 minutes before the start of the lab session. Students should arrive for lecture 5 minutes before lecture and never after the official start of the lecture, which is always on the hour.** Instructors MAY DEDUCT points for arriving late to lecture, lab, or other educational experiences including scheduled time for the class at the library, tours off campus, guest speakers and other events. Instructors may also choose to award extra points for participation to students who are fully engaged.

A student who arrives late is a distraction to the class and is disrespectful to the instructor and fellow students. The instructor has the ri

3. Study class material BEFORE lecture and lab.
4. Utilize open lab times to practice new skills and review previously learned skills (scheduled with individual instructors).
5. Clarify material and ask questions of the appropriate instructor as needed.
6. Utilize the Learning Centers at the college for study skills information and test-taking strategies.
7. Discuss program-related issues with program director/advisor at the EARLIEST sign of academic difficulty.
8. Seek assistance from a college counselor at the EARLIEST sign of personal problems that interfere with the ability to succeed in school.

Academic Integrity

MLT students must adhere to moral and ethical principles in the classroom and at the clinical sites. This includes BUT IS NOT limited to that of honesty regarding the following:

1. Cheating on a test: Copying from another's test paper or test questions, using unauthorized materials during a test, knowingly using, buying, selling, stealing, transporting, or soliciting in whole or in part the contents of an unadministered test, substituting for another student or permitting another student to substitute for oneself to take a test, or bribing another person to obtain an unadministered test.

2. Plagiarism: Meaning the appropriation, buying, receiving as a gift, or *obtaining by any means* another person's work and the unacknowledged submission or incorporation of it in one's own work.

3. Collusion: Meaning the unauthorized collaboration with another person in preparing written work offered for credit.

4. Recy related issues with 452-4(d196W* nBT/F2 11.04 Tm0 g0 G[ )]T

Appeal Process

This procedure is to be used when a student wishes to challenge or appeal an MLT policy or instructor decision. The steps are to be followed up to the point that a resolution is achieved.

ty to initiate the procedure in the proper sequence to avoid delay or dismissal of the appeal.

STEP 1:

a. Appeal of a grade: The student presents the issue verbally and/or in writing to the instructor involved.

b. The faculty member will attempt to resolve the issue directly with the student.

c. Appeal of an MLT policy: The student presents the issue verbally and/or in writing to their advisor.

STEP 2:

a. If necessary, the student may ask their advisor/counselor to meet together with her/him and the involved instructor in an attempt to resolve the issue.

STEP 3:

If the issue is not resolved after Step 2, the student submits a written appeal to the program director. The appeal is to include:

A. The issue

B. The desired outcome

C. The justification for the desired outcome

This will be presented to the entire program faculty for a decision.

Additional Information

MLT Open Lab**:** The MLT Laboratory is H360. Additional lab time must be scheduled with the instructor of the class. Students may not be in the laboratory without prior permission. The presence of an instructor is required.

Student workers: Student workers are only to enter the lab when scheduled to work. Student workers may not admit other students, or anyone else, into the laboratory at any time. Student workers found to be

Students will follow all safety rules throughout the program and during clinical practicum. Clinical sites may provide additional safety training and expect students to adhere to their policies while in their facility.

Books containing Material Safety Data Sheets (MSDS), now called SDS, the chemical hygiene plan (CHP), Exposure control plan (ECP) and trai

Fall semester	Spring semester

secure location elsewhere on campus. National background studies must be performed online and are not stored on campus. Electronic services may be used to collect required health and

computer access issues.

Health Services

Health Services on the LSC campus does not offer healthcare. It is a health resource for students. It provides students with educational information, referrals to healthcare agencies, health insurance information, and health promotion programs. Information is available in Health Services and on their website for many health service options in Duluth for Minnesota State health insurance. Students can also pick up information on other health insurance options through Health Services as well as much educational information.
https://www.lsc.edu/current-students/health-education-resources/

NOTE: Health Insurance is strongly recommended for all health care students. Should accidents occur, students may be sent to the hospital for evaluation and/or treatment. Associated expenses would b

entered the program. All courses are A-F grading except Clinical Practicum courses which are pass or no credit (fail).

1.

c. Students should be aware of the LSC FN policy. Holidays are counted in the 14 day time

Volunteer Requirements

Students are required to participate in 2 hours of volunteer service related to healthcare per semester (4 semesters in the program) or a total of 8 hours for the full program. Contact the program director for additional details on requirements.

Advisement/Evaluations

Course work will be assessed by written tests, worksheets, practical exams, laboratory exercises, reports (oral and/or written), performance evaluations, etc. as indicated in the individual course

Clinical Practicum Placement

Affiliation agreements are legal contracts arranged with each approved clinical site. Clinical practicum experiences are made available to students who have satisfactorily completed the required program courses **and all health and background study requirements**. See placement order below. The following local clinical affiliates are usually available as practicum sites for MLTs:

		C	
1. Community Memorial Hospital Cloquet, MN	1-2	no	no
2. Essentia Health St.Mary's Medical Center Duluth, MN	0-4	no	no
3. Essentia Health St.Mary's Hospital-Superior, WI	1-2		

attendance, acceptable affective evaluations and who have completed all health requirements and background studies on time, will have first priority for clinical practicum slots over students with lower performance.

Expectations of Students Attending Clinical Practicums arranged through Lake Superior College

Clinical Practicums

The clinical practicums are 16 weeks in length and are broken down into the following weeks:

1. Microbiology 4 weeks
2. Transfusion Services (Immunohematology) 4 weeks
    a. May include a job shadow at memorial blood center
3. General Lab
    a. Hematology 2 weeks
    b. Coagulation 1 week
    c. Urinalysis -1 week
    d. Chemistry 3 weeks
    e. Phlebotomy/Specimen Collection 1 week
    f. Other experience provided by the clinical site that is specific to their workload such as ECGs, observation of a bone marrow collection and preparation, observation of autopsy, preparation of histological slides, etc.

Students begin their clinical experience spring semester of the second year after successfully completing all technical and academic courses. Students are expected to attend clinical sites Monday through Friday for their scheduled shifts each day. Students should be allowed breaks, and lunch. During practicum, the MLT students will return to campus for the Medical Laboratory Technician Seminar. This course may be offered for the second 8 weeks of the semester from 1-3pm on Fridays or for the entire 16 weeks from 3-4pm. Students must attend seminar. Students who are placed outside of the Duluth area may arrange professional video conferencing solutions with the instructor and attend class electronically.

If all goes according to schedule and no extra time is required at a clinical site, the MLT students will complete their rotation in time to graduate with the rest of the students in May. If a student needs to spend additional time in a rotation, he/she will receive an I

Attendance at Clinical Practicums

These policies are based on standards expected in the health care industry.

A. Good attendance is expected during clinical practicum experiences. Absence should be for serious illness or emergencies only and outside appointments should be scheduled around the clinical schedule whenever possible. Days missed will be tracked by the clinical facility and reported to the clinical practicum coordinator. A defined protocol should be followed for absences:

d. Not following proper safety procedures and policies.

e.

STEP #2:

The second time an inappropriate behavior is noted, the instructor will take the involved student aside privately, shortly after the incident and discuss with him/her the inappropriate behavior. The instructor will complete an INCIDENT REPORT making sure to complete all areas of the form. The student will sign the report. The clinical instructor will inform the Education/Clinical Coordinator about the incident. The Education/Clinical Coordinator will call the Program Director and record the time and date of that conversation. The incident report will be placed in the

the work they will be learning that day, week, etc. and the p
regarding student theoretical knowledge.

d. completing the student evaluation forms in a very timely manner as the student and preceptor complete work together. Students are to keep notebooks and are responsible for recording daily actions in case the workload is too heavy to take time to record work performed on any one day. Students are responsible for obtaining signatures but it is preferable if the preceptor and student work together to remember to complete the forms.
e. completing the didactic and behavioral portions of the student evaluations, honestly and with careful thought that includes constructive feedback for the student.
f. reporting students who are chronically late or absent, have a poor attitude regarding the work, clinical site, preceptor, personnel, program, patients or fellow students.

A. Service Work

a. Please treat the student with respe cognizant of the fact that the student is attending the clinical site as part o ation, not as a new employee.
b. Please do not use the student to r onnel who have called in sick, nor coerce the student to perform like e with the promise of a good evaluation or future employment.
c. Please do not require sulted if the st has not yet be deemed]TJhomple14 3(t)-4(or)9(m)7 4( )-4(pro)e

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d.

g.
student in gossip, employee complaints or other situations which are not pertinent to the student learning experience.

C. Positive Professional behavior and Communication

Ideally, preceptors should model good communication by:

a. having a positive attitude toward the student and the level of education the student has currently achieved, and hopes to achieve in the future
b. promoting a positive attitude about the medical laboratory profession, the clinical site