



BROOKLINE COLLEGE
Small College. **Big Future.**

MEDICAL
LABORATORY
DEPARTMENT
STUDENT HANDBOOK

*MEDICAL LABORATORY TECHNICIAN ASSOCIATE DEGREE
MEDICAL LABORATORY SCIENCE BACHELOR DEGREE*

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Dear Student:

Welcome to Brookline College Medical Laboratory Department! Whether you are starting the associate degree program to become a Medical Laboratory Technician (MLT) or are enrolling in the Medical Laboratory Science (MLS) bachelor degree program you have chosen an important and exciting career path.

Laboratory medicine requires understanding of biological and chemical sciences with a strong foundation of mathematics. At the foundation, both programs consist of a mix of general education and professional coursework scheduled to provide students with the knowledge, skills and professional traits required to move to more advanced concepts. Both programs have incorporated opportunities for students to apply their learning in real-world or simulated laboratory environments. As an entry-level MLT or MLS you will be expected to perform complex procedures that are used to monitor, diagnose and treat patients and to utilize the knowledge learned to evaluate results and take steps to ensure the quality of results that are reported. In addition, laboratory technicians and scientists must be committed to the accuracy and precision of their work and always be aware of the impact of their work on the patients and clients who are being served.

The MLT and MLS programs at Brookline are focused on preparing graduates for employment in medical laboratories that may be found in hospitals, physician offices, and reference labs. However, the technical skills that are mastered in these programs can transfer to other types of laboratories, including research, biotechnology, industrial and forensics. For some graduates, completion of a program in laboratory science can begin the journey toward other medical professions like physicians, physician assistants as well as other advanced graduate degrees.

This handbook is the first step of introducing you to the MLT and MLS Programs. The information provided supplements College wide policies and procedures that can be found in the catalog and catalog supplements and is subject to change. Please take the time to read through and be familiar with both documents to ensure a successful experience. In addition, please be aware of the many resources available to you at Brookline College to support your educational experiences. If you have any questions, please don't hesitate to ask. The most successful students are those who are willing to work closely with others in the college community.

Best wishes for a successful academic career.

Respectfully,

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Mission and Goals

Brookline College Mission Statement

Brookline College is an independent, accredited institution dedicated to meeting the educational needs of a developing multicultural society. The institution is committed to preparing students academically and professionally to meet the constantly changing employment requirements of business, industry, public service organizations, and medical support agencies functioning in a highly advanced and expanding technological community.

Brookline College Objectives

The objectives of Brookline College are to:

1. Provide comprehensive, concentrated, qualitative educational programs, which will guide students through the development of the competencies needed to meet the employment requirements in a highly technological environment.
2. Provide services that will support a diverse student body in their pursuit of postsecondary education on a variety of levels and eliminate the barriers to the completion of their educational objectives.
3. Provide innovative approaches and methodologies in a non-traditional educational environment emphasizing a multiplicity of skills.
4. Recognize and integrate lifelong learning and academic experiences as they would apply to each student's program of study.
5. Provide students with access to faculty members whose academic qualifications and practical experience will provide the valuable leadership necessary to prepare students for successful integration into the workplace.
6. Provide learners with the academic, cognitive, and professional skills necessary for career advancement.
7. Provide all students with a hands-on working knowledge of information technology procedures and applications.

Medical Laboratory Department Mission Statement

In support of the College mission the Medical Laboratory Technician and Medical Laboratory Science Programs are dedicated to prepare highly qualified entry-level medical laboratory technicians and medical laboratory scientists with relevant skills and knowledge that meet the needs of the profession and are prepared for continuous education, career mobility and full participation in community life.

The MLT and MLS curricula are based upon verified roles and responsibilities of entry-level practitioners providing opportunities for integration and application of learned concepts, attitudes, values and skills in real life learning experiences within clinical and simulated laboratories.

Medical Laboratory Department Goals

The Medical Laboratory Technician and the Medical Laboratory Science Programs will:

1. Graduate 70% of students who begin the last half of the program.
2. Have a pass rate of 75% over a three-year period for students who sit for the Board of Certification examination for the first time during their first year following graduation.
3. Successfully prepare students for the workplace so that over a three-year continuous period an average of 70% of the graduates are employed in a related field or are continuing their education.

The Medical Laboratory Technician Program will:

1. Provide educational opportunities through general education and professional coursework that support the mission and goals of Brookline College, and the MLT program.
2. Provide classroom, student laboratory and clinical laboratory opportunities for students to safely experience and learn real world applications of laboratory medicine in the areas of blood bank, clinical chemistry, immunology/serology, hematology, microbiology, urine and body fluid analysis, safety and governmental regulation compliance and professionalism.
3. Provide academic and clinical experiences that provide graduates with necessary skills required for an entry-level medical laboratory technician as defined by professional organizations such as the American Society of Clinical Pathology, the National Accrediting Agency for Clinical Laboratory Sciences and the American Society of Clinical Laboratory Science.

The Medical Laboratory Science Program will:

1. Provide educational opportunities through general education and professional coursework that support the mission and goals of Brookline College, and the MLS program.
2. Provide classroom, student laboratory and clinical laboratory opportunities for students to safely experience and learn real world applications of laboratory medicine in the areas of blood bank, clinical chemistry, immunology/serology, hematology, microbiology, urine and body fluid analysis, laboratory operations, safety and governmental regulation compliance, laboratory administration and supervision, educational methodologies, principles and practices of clinical study design and professionalism.
3. Provide academic and clinical experiences that provide graduates with necessary skills required for an entry-level medical laboratory science as defined by professional organizations such as the American Society of Clinical Pathology, the National Accrediting Agency for Clinical Laboratory Sciences and the American Society of Clinical Laboratory Science.

Medical Laboratory Department Learning Outcomes

Graduates of the Medical Laboratory Technician Associate in Science Degree Program will be able to:

1. Demonstrate professionalism as expected of a health care worker by: adhering to regulations, including safety and confidentiality, as required by federal, state and local laws and the institutions for which they are employed; acting with integrity; employing ethical standards and behaviors; communicating and collaborating with other members of the health care team, patients and the public; adhering to acceptable hygiene and appearance standards; and working within established standards of practice.
2. Safely and accurately collect and process various biological samples for analysis. Perform, monitor and apply quality control and quality assurance principles in the workplace. Perform and demonstrate entry-level technical skills for routine laboratory procedures in the pre-analytical, analytical and post-analytical components of chemistry hematology/hemostasis, blood bank/transfusion medicine, microbiology, immunology, urinalysis/body fluids, and phlebotomy and laboratory operations.
3. Recognize and apply results of laboratory analysis of normal, abnormal and unexpected results as required of an entry-level medical laboratory technician and take appropriate actions with regard to reporting results and/or repeating policies and procedures. Evaluate and take action on results of routine laboratory analyses following predetermined protocols and using effective critical thinking skills.

Graduates of the Medical Laboratory Science Bachelor in Science Degree Program will be able to:

1. Demonstrate professionalism as expected of a health care worker by: adhering to regulations, including safety and confidentiality, as required by federal, state and local laws and the institutions for which they are employed; acting with integrity; employing ethical standards and behaviors; communicating and collaborating with other members of the health care team, patients and the public; adhering to acceptable hygiene and appearance standards; and working within established standards of practice.
2. Perform, monitor and apply quality control and quality assurance principles in the workplace. Safely and accurately collect and process various biological samples for analysis. Perform and demonstrate entry-level technical skills for routine and specialized laboratory procedures in the pre-analytical, analytical and post-analytical components of chemistry hematology/hemostasis, blood bank/transfusion medicine, microbiology, immunology, urinalysis/body fluids, and laboratory operations. Perform entry-level supervisory, administrative, education and training functions as appropriate of a medical laboratory scientist. Demonstrate the ability to develop, implement and disseminate the results of a clinical research study.
3. Recognize and apply results of laboratory analysis of normal, abnormal and unexpected results as required of an entry-level medical laboratory scientist and take appropriate actions with regard to reporting results and/or repeating policies and procedures.

Evaluate and take action on results of routine and specialized laboratory analyses following predetermined protocols and using effective critical thinking skills.

Entering the MLT or MLS Programs

Essential Functions

For students to be successful in the field of laboratory science characteristics have been identified that are essential for safe and effective performance within the field. It is our obligation to inform potential students of these essential functions demanded by the occupation. The following non-academic abilities or skills have been determined to be necessary for the effective performance of a medical laboratory technicians and medical laboratory scientist:

- Fine motor skills necessary for functions such as blood collection, pipetting, operating instruments and other related tasks
- Eye/hand and foot coordination that ensure safe movement around hazardous chemicals and equipment
- Sufficient visual acuity, color differentiation and depth perception to perform MLT/MLS functions
- Ability to lift, move, and operate equipment used in laboratory diagnosis and specimen collection processes
- Walking and standing for prolonged periods of eight to ten hours or more
- Hearing abilities sufficient to physically monitor and assess laboratory activities and patient needs
- Psychological stability sufficient to perform MLT/MLS functions effectively in fast paced and stressful environments and to exercise critical thinking, reasoning, and judgment in patient care situations
- Communicate clearly and effectively in English through oral, written or alternate means, to accurately receive and transmit information
- Tolerate exposure to dust, fumes, smoke, gases, odors, mists, solvents, grease, oils and other chemicals
- Act with compassion, integrity and follow ethical standards

Background Check and Health and Requirements

As per college policy, all allied health students are required to have a background check upon enrollment.

For the protection of students and others within healthcare settings, students must demonstrate immunity to the Hepatitis B (or evidence that at least two injections of the series have been received, or a signed refusal waiver) prior to working with any biological fluids within the student laboratory and/or clinical settings. In addition, students must submit documentation of the following at least **one semester** prior to beginning clinical experiences:

1. Current American Heart Association CPR certificate
2. Drug screen (within one month of starting clinical)
3. Physical exam and health and immunization records that include the following
 - a. Two-step PPD (Mantoux, TB test) or chest x-ray if TB test positive, or titer

- b. Proof of immunity to measles, mumps, rubella, varicella
- c. Td or Tdap, seasonal and H1N1 flu vaccines

Program Curricula

The Medical Laboratory Technician and the Medical Laboratory Science Programs are designed to allow students multiple avenues of progression. Upon admission students can enroll for either program independently or upon completion of the MLT program, students can apply for admission to the MLS program. Upon completion of either program graduates have options for certification.

Program of Study

Specific course availability/order each semester is *subject to change*.

MEDICAL LABORATORY TECHNICIAN - ASSOCIATE DEGREE PROGRAM						
Effective May 2016 (Subject to Change)						
Course #	Name	Hours				CR
		Lec	Lab	Clinical	Clock	
<i>Semester 1</i>						
MLT 100	Intro to MLT	2	2	0	60	3
EN 144	English Composition	3	0	0	45	3
BI 165	Intro to Biology	3	0	0	45	3
CHM 100	General Chemistry	3	0	0	45	3
MH 140	College Mathematics	3	0	0	45	3
<i>Semester 2</i>						
MLT 101	Urinalysis	2	2	0	60	3
MLT 105	Microbiology I	3	2	0	75	4
MLT 120	Clinical Chemistry I	3	2	0	75	4
MLT 200	Hematology I	3	2	0	75	4
MLT 170	Introduction to Immunology	2	0	0	30	2
<i>Semester 3</i>						
MLT 110	Microbiology II	3	2	0	75	4
MLT 130	Immunoematology	3	2	0	75	4
MLT 135	Clinical Chemistry II	3	2	0	75	4
MLT 205	Hematology II	3	2	0	75	4
<i>Semester 4</i>						
MLT 250	MLT Clinical Experience			360	360	8
SO 179	Intro to Sociology	3	0	0	45	3
PS 135	Intro to Psychology	3	0	0	45	3

MEDICAL LABORATORY SCIENCE - BACHELOR DEGREE PROGRAM						
Successful completion of all courses from MLT Program – plus the following:						
<i>(Subject to Change)</i>						
Semester 5						
BI 300	Introduction to Genetics	3	0	0	45	3
CHM 320	Organic Chemistry	3	0	0	45	3
MH 240	Intermediate College Mathematics	3	0	0	45	3
PO 136	Intro to Political Science	3	0	0	45	3
PH 410	Ethics	3	0	0	45	3
Semester 6						
CHM 340	Principles of Biochemistry	3	0	0	45	3
MLS 310	Techniques of Molecular Biology	3	2	0	75	4
CO 415	Multi-Cultural Communication	3	0	0	45	3
QN 320	Essential Statistical Thinking	3	0	0	45	3
SO 365	Socialization and Societal Development	3	0	0	45	3
Semester 7						
MLS 300	Advanced Clinical Chemistry	3	2	0	75	3
MLS 315	Laboratory Operations	2	0	0	30	2
MLS 410	Transfusion Medicine	3	2	0	75	4
MLS 405	Advanced Hematology	2	2	0	60	3
MLS 420	Advanced Microbiology	2	2	0	60	3
Semester 8						
MLS 450	Clinical Laboratory Practicum	0	0	360	360	8
MLS 455	MLS Professional Seminar	3	0	0	45	3
PD 299	Professional Development	3	0	0	45	3

Attendance

As described in the College Catalog attendance is mandatory for all class periods, laboratory sessions and scheduled clinical/simulation experiences. Excess absences, tardiness and leaving class sessions early may place students at risk for lower lab, assignment, quiz and exam grades. Each MLT/MLS syllabus will describe attendance policies that are unique to that course. In accordance with College policies any students who is absent from all courses for 14 consecutive, calendar days will be **withdrawn from the College**. Absences of 14 consecutive calendar days for any one course will result in the student being **withdrawn from that course**. Attendance is taken every day for each course meeting. Therefore, if a student is not present for 14 consecutive calendar days, they will be dropped. Any student who does not attend for a minimum of 50% of a course will not receive credit for that course. Please refer to the syllabi for course specific rules.

Students should be aware that absences from laboratory sessions may result in a zero for any related assignments or activities. The field of laboratory science centers on the understanding of laboratory practices, acquiring competency of the technical skills and the application of test results. Many laboratory sessions take a great deal of instructor preparation, costly reagents and supplies and may not be able to be made up. Please contact your instructor *in advance* of missing

any laboratory sessions to determine if a make-up opportunity will be available.

It is up to the discretion of the instructor regarding make-up of assignments, quizzes and examinations and absences may be awarded a zero (0). Please refer to the course syllabus and clarify the policy with instructors before missing scheduled assignments, quizzes and examinations.

In the event an instructor authorizes proctored make-up time for a MLT/MLS quiz, examination or laboratory activity, proctored time will be available on Fridays from 9 AM to 3 PM. This time must be scheduled in advance and in accordance with instructor's policies.

Code of Conduct

Students are expected to be aware of and following the Brookline College Student Code of Conduct that is found in the College Catalog. In addition, the MLT and MLS Program recognize the Codes of Conduct established by the American Society for Clinical Laboratory Science (ASCLS) and American Society for Clinical Pathology (ASCP).

ASCLS Code of Ethics

I. Duty to the Patient

Clinical laboratory professionals are accountable for the quality and integrity of the laboratory services they provide. This obligation includes maintaining individual competence in judgment and performance and striving to safeguard the patient from incompetent or illegal practice by others.

Clinical laboratory professionals maintain high standards of practice. They exercise sound judgment in establishing, performing and evaluating laboratory testing.

Clinical laboratory professionals maintain strict confidentiality of patient information and test results. They safeguard the dignity and privacy of patients and provide accurate information to other health care professionals about the services they provide.

II. Duty to Colleagues and the Profession

Clinical laboratory professionals uphold and maintain the dignity and respect of our profession and strive to maintain a reputation of honesty, integrity and reliability. They contribute to the advancement of the profession by improving the body of knowledge, adopting scientific advances that benefit the patient, maintaining high standards of practice and education, and seeking fair socioeconomic working conditions for members of the profession.

Clinical laboratory professionals actively strive to establish cooperative and respectful working relationships with other health care professionals with the primary objective of ensuring a high standard of care for the patients they serve.

III. Duty to Society

As practitioners of an autonomous profession, clinical laboratory professionals have the responsibility to contribute from their sphere of professional competence to the general well-being of the community.

Clinical laboratory professionals comply with relevant laws and regulations pertaining to the practice of clinical laboratory science and actively seek, within the dictates of their consciences, to change those which do not meet the high standards of care and practice to which the profession is committed.

ASCLS Pledge to the Profession

“As a clinical laboratory professional, I strive to:

- Maintain and promote standards of excellence in performing and advancing the art and science of my profession,
- Preserve the dignity and privacy of others,
- Uphold and maintain the dignity and respect of our profession,
- Seek to establish cooperative and respectful working relationships with other health professionals,
- Contribute to the general well-being of the community.

I will actively demonstrate my commitment to these responsibilities throughout my professional life.” (<http://www.ascls.org/about-us/code-of-ethics>)

The Classroom

Academic Integrity

“Brookline College requires all students, faculty, and staff to conduct themselves and produce academic work in an ethical manner. Students are expected to conduct themselves at all times with the highest academic standards.” (*2015 College Catalog*, March 1, 2015, p. 39)

The College Catalog is very clear on the expectations for students with regard to plagiarism (“the use of another person’s or a group’s words or ideas without clearly acknowledging the source of that information, resulting in the false representation as one’s own work.” *2015 College Catalog*, p. 39) and cheating. Should you have any questions or concerns as to whether work you are submitting would be considered plagiarism, consult with your instructor, the program director or a member of Student Services. Following College policies, **any work that is found to have been plagiarized or a result of cheating will receive a zero (0) grade for the first offense. Second offense will result in a failing (F) grade for the course, and third offense may result in the student being expelled from the college.** (*2015 College Catalog*, March 1, 2015, p. 39)

Cell Phone Use

Cell phones use is not permitted in any class unless indicated by the instructor. Students who abuse this policy may be requested to turn in their cell phone to the instructor and it will be returned at the end of the class session.

Cell phone use is not permitted in any laboratory session. Most laboratory sessions will involve some degree of reagent, blood or body fluid use and as such represents chemical and biological hazards. At no time should students be using their cell phones during laboratory sessions. Any calculations required will be done on calculators that can be found and will remain in the laboratory, or after the lab session is finished. **There are no exceptions to this policy.**

The Student Laboratory

Laboratory sessions associated with MLT and MLS courses incorporate laboratory techniques and applications that are relevant to their career path. Performing laboratory analyses on blood, urine and other body fluids that may pose a risk of biohazardous agents and are commonplace

and often involve “reagents” or chemicals that will react with substances in the sample to allow us to identify and measure substances. Appropriate safety procedures will be provided and must be followed at all times during laboratory exercises. Please refer to the Infectious Disease Management Policy that describes specific policies including but not limited to:

- There will be no eating or drinking in the student or clinical laboratories.
- There will be no application of cosmetics in the student or clinical laboratories.
- There will be no cell phone use in the student or clinical laboratories.
- There will be no smoking in the student or clinical laboratories.
- Students will wear approved scrubs, impermeable lab coats and shoes at all times in the student and clinical laboratories.
- Personal protective equipment use will be understood and practiced in the student and clinical laboratories.
- Students will follow proper hand washing, disinfection, chemical hygiene and biological hygiene plans when in the student and clinical laboratories.

The Clinical Experience

Students at Brookline College are fortunate to have the opportunity to experience real-world applications in area laboratories and/or simulated laboratories. External experiences are provided to the students by clinical facilities in collaboration with the College based on the understanding that the highest quality graduates will have had practiced learned skills and applied their knowledge in a workplace or simulated environment. External clinical sites do this at their own time and expense, recognizing the value to the students and the profession. **It is the responsibility of the student to be professional and respectful of the opportunities, the instructors, other healthcare workers and the public during these clinical placements.**

Clinical experiences are assigned by the program based on the availability of sites. Students should not contact sites independently, however if they have suggestions, we encourage they be brought to program faculty for initial contact.

Students are not guaranteed placement at the site of their choosing or that is most convenient to them. As noted in the College Catalog, placement may be assigned up to a three (3) hour commute each way. Although we try our best to accommodate students in a way that best fits in with their needs, students must be prepared to establish travel arrangements if needed. There are some sites that provide evening/night or weekend rotations to expose student the greatest learning opportunity, but most will be scheduled during day time, week day hours.

Should the number of students exceed the available external clinical sites students will be assigned to the simulated laboratory experience based on cumulative GPA and attendance history. To supplement student learning every effort will be made to provide additional observation opportunities within external sites.

Should the number of students exceed the availability of external clinical sites and simulated laboratory space, students will be assigned based on cumulative GPA and attendance history. Students who are not placed during their scheduled semester, will be given priority for placement the following semester.

Should a student refuse the assigned placement the college is not obligated to find alternate opportunities and the student will be unable to complete the program.

The nature of work in a healthcare setting requires the adherence to high professional standards that includes following local, state and federal regulations and law. Confidentiality, safe and ethical behavior, honesty, accountability for one's actions, punctuality and attendance are just a few characteristics that are required of a healthcare worker. Within that list, there are some circumstances that may result in immediate dismissal from the site, including:

- Breach of confidentiality or HIPAA regulations
- Practicing unsafe behaviors that could result in injury to others
- Reporting out incorrect results, or falsifying data
- Refusing to accept responsibility for actions that do not follow the clinical agency or college policy
- Evidence of use of or being under the influence of alcoholic products or illegal substances during clinical experience.

Being dropped from a clinical experience for unprofessional behavior may result in dismissal from the college.

Students participating in clinical and/or simulated laboratory experiences are expected to adhere to all policies and procedures of the institution and the college. Dates and times of attendance will be determined through consult with the Clinical Liaison of the clinical sites and the Lead Instructor or Program Director at the College. Students are expected to adhere to the schedule as assigned and treat the experience as they would a job. Clinical experiences provide students with the opportunity for an informal interview for potential hire upon graduation so students should always be present with that in mind.

HIPAA Training

Students are required to have training covering the Health Insurance Portability and Accountability Act prior to beginning their final clinical experience semester. Evidence of completion must be submitted to the lead instructor or program director prior to being scheduled.

Service Work Policy

Student's work in each rotation shall be signed/co-signed by the appropriate laboratory professional. Students shall not be used as substitutes (i.e. the laboratory staffing plan must not rely upon student work.) Upon completion of a rotation or specific competencies, students may perform service work for compensation (above and beyond the training hours required by the program) with the approval of the Lead Instructor or Program Director and Clinical Liaison.

Grading

MLT and MLS faculty will adhere to the academic policies and grading system published in the College Catalog. As stated students in the MLT program must earn a grade of "C" or better in all professional courses (Course code MLT or MLS) in order to progress. Any professional courses

where a grade less than a “C” is earned must be repeated.

Successful completion of the MLT and MLS programs demands that the student demonstrate competence in their knowledge, technical skills and professional skills. Therefore, these parameters are incorporated into the final grade for professional courses. Successful completion of both theory and laboratory components are required for most program specific courses. Please refer to the syllabus for more information.

Clinical Experience

Clinical experiences will include technical and professional evaluations by the clinical instructors and grades from study packages and college provided quizzes. The final grade calculation will be based on the following.

- Professionalism: 30%
- Technical Skills: 55%
- Theory: 15%

Evidence of competence in all three areas must be demonstrated. Upon calculations of the evaluations tools for Technical Skills and Professionalism any scores below 75% **for any component of the clinical experience is unsatisfactory and will require remediation.** Obtaining a Technical Skill or Professionalism score below 70% for more than three of the four major areas (hematology, chemistry, microbiology and blood bank) will result in a failing grade for the course. It will be up to the Lead Instructor, Program Director and Director of Education to determine if a student will be eligible to repeat the clinical experience.

Academic Standing

Students enrolled in the MLT or MLS program must meet all of the standards set forth in the College Catalog. Students must maintain satisfactory academic standing with a cumulative grade point average (CGPA) of 2.0 to remain in the MLT and MLS programs.

In the event that a student is required to repeat a course that is a prerequisite for an advanced course, the advanced course may not be taken until the student successfully passes the prerequisite course. Any student who does not satisfactorily complete any MLT or MLS course after two attempts, will be dismissed from the program and has the option of following the Appeal Process described in the *2015 College Catalog*. Any student who receives an unsatisfactory grade for two or more MLT or MLS courses in any one semester will be allowed one semester to demonstrate the ability to obtain satisfactory academic standing in program courses. If after completion of that semester the student is unable to obtain a CGPA of 2.0 or has not successfully completed the repeated courses, they will be dismissed from the program.

Resolution of Student Concerns are addressed through College policy as described on pages 13-15 of the *2015 College Catalog*.

Instruction Delivery Methods

The program will be delivered using a variety of instructional formats, which may include: lectures, slide presentations, simulation scenarios, demonstration and return demonstration, role

playing, interactive online instruction, and other critical thinking activities. Students will participate in individual and cooperative learning activities in the classroom, clinical lab environments, and online discussions. Computer labs, laptop carts, electronic devices, smart classrooms, virtual learning environments, simulation manikins, DVDs, and other multimedia equipment provide the technological support for various teaching methodologies.

Professional Certification

Obtaining professional certification is an important step upon completion of your academic program. Although it may be possible to acquire jobs without certification, most hospital laboratories will require their staff to hold some type of recognized national certificate that proves the graduate has met minimum professional standards. In addition, some states require licensure and national certification, in some cases, is consider reciprocal for that licensure. Below is information from two recognized organizations that provide certification routes.

Students who successfully complete the certification examination within one year of graduation from a recognized organization, and who request, will have the fee reimbursed by Brookline College. Official proof of passing must be submitted to directly to the Program Director for processing.

ASCP Board of Certification

Medical Laboratory Technician Certification – ASCP

“Application Fee: \$215.00

To be eligible for this examination category, an applicant must satisfy the requirements of at least one of the following routes:

ROUTE 1: An associate degree or at least 60 semester hours (90 quarter hours) of academic credit from a college/university accredited by a recognized regional or national accreditation agency, AND successful completion of a NAACLS accredited MLT program within the last 5 years; OR

ROUTE 2: An associate degree or at least 60 semester hours (90 quarter hours) of academic credit from a regionally accredited college/university, including 6 semester hours (9 quarter hours) of chemistry and 6 semester hours (9 quarter hours) of biology, AND CLA(ASCP)* certification; OR

ROUTE 3: An associate degree or at least 60 semester hours (90 quarter hours) of academic credit from a regionally accredited college/university, including 6 semester hours (9 quarter hours) of chemistry and 6 semester hours (9 quarter hours) of biology, AND successful completion of a 50 week U.S. military medical laboratory training course**; OR

IMPORTANT INFORMATION: Effective January 1, 2015 the Route 3 eligibility route for the MLT will be revised as follows: An associate degree or at least 60 semester hours (90

quarter hours) of academic credit from a regionally accredited college/university, including 6 semester hours (9 quarter hours) of chemistry and 6 semester hours (9 quarter hours) of biology), **AND** successful completion of a 50 week U.S. military medical laboratory training course **within the last ten years.****

ROUTE 4: An associate degree or at least 60 semester hours (90 quarter hours) of academic credit from a regionally accredited college/university, including 6 semester hours (9 quarter hours) of chemistry and 6 semester hours (9 quarter hours) of biology, **AND** three years full time acceptable clinical laboratory experience in Blood Banking, Chemistry, Hematology, Microbiology, Immunology, and Urinalysis/Body Fluids in the U.S., Canada or an accredited laboratory*** within the last ten years.” <http://www.ascp.org/Board-of-Certification/GetCertified#tabs-1>

Medical Laboratory Science Certification – ASCP

“To be eligible for this examination category, an applicant must satisfy the requirements of at least one of the following routes:

“Application Fee: \$240.00

To be eligible for this examination category, an applicant must satisfy the requirements of at least one of the following routes:

ROUTE 1: A baccalaureate degree from a regionally accredited college/university including courses in biological science, chemistry and mathematics, **AND** successful completion of a NAACLS accredited Medical Laboratory Scientist program within the last five years.

ROUTE 2: MLT(ASCP) certification, **AND** a baccalaureate degree from a regionally accredited college/university, including 16 semester hours (24 quarter hours) of biological science (with one semester in microbiology), 16 semester hours (24 quarter hours) of chemistry (with one semester in organic or biochemistry), one semester (one quarter) of mathematics, **AND** two years of full time acceptable clinical laboratory experience in Blood Banking, Chemistry, Hematology, Microbiology, Immunology, and Urinalysis/Body Fluids in the U.S., Canada or an accredited laboratory* within the last ten years.

IMPORTANT INFORMATION: Effective January 1, 2017 the Route 2 for the MLS will be revised as follows:MLT(ASCP) certification, **AND** a baccalaureate degree from a regionally accredited college/university, including 16 semester hours (24 quarter hours) of biological science (with one semester in microbiology), 16 semester hours (24 quarter hours) of chemistry (with one semester in organic or biochemistry), one semester (one quarter) of mathematics, **AND** two years of full time acceptable clinical laboratory experience in Blood Banking, Chemistry, Hematology, Microbiology, Immunology, and Urinalysis/body Fluids in the U.S, Canada or an accredited laboratory* **within the last four years.**

ROUTE 3: CLA(ASCP)** certification, **AND** a baccalaureate degree from a regionally accredited college/university, including 16 semester hours (24 quarter hours) of biological

science (with one semester in microbiology), 16 semester hours (24 quarter hours) of chemistry (with one semester in organic or biochemistry), one semester (one quarter) of mathematics, AND four years of full time acceptable clinical laboratory experience in Blood Banking, Chemistry, Hematology, Microbiology, Immunology, and Urinalysis/Body Fluids in the U.S., Canada or an accredited laboratory* within the last ten years.

IMPORTANT INFORMATION: Effective January 1, 2017 the Route 3 for the MLS will be revised as follows: CLA(ASCP)** certification, AND a baccalaureate degree from a regionally accredited college/university, including 16 semester hours (24 quarter hours) of biological science (with one semester in microbiology), 16 semester hours (24 quarter hours) of chemistry (with one semester in organic or biochemistry), one semester (one quarter) of mathematics, AND four years of full time acceptable clinical laboratory experience in Blood Banking, Chemistry, Hematology, Microbiology, Immunology, and Urinalysis/Body Fluids in the U.S., Canada or an accredited laboratory* **within the last eight years**.

ROUTE 4: A baccalaureate degree from a regionally accredited college/university, including 16 semester hours (24 quarter hours) of biological science (with one semester in microbiology), 16 semester hours (24 quarter hours) of chemistry (with one semester in organic or biochemistry), one semester (one quarter) of mathematics, AND five years of full time acceptable clinical laboratory experience in Blood Banking, Chemistry, Hematology, Microbiology, Immunology, and Urinalysis/Body Fluids in the U.S., Canada or an accredited laboratory* within the last ten years.”

<http://www.ascp.org/Board-of-Certification/GetCertified#tabs-1>

American Medical Technologists

Currently the fee to apply for MLT or MLS certification through the AMT exam is \$160.00 (effective 4/2016).

Medical Laboratory Technician Certification – AMT

“Applicant shall meet one of the following eligibility routes:

ROUTE 1 (EDUCATION): Applicant shall possess an associate degree in medical laboratory technology (or equivalent) from a program or institution accredited by a recognized regional or national accreditation agency.^{1, 2, 3}

ROUTE 2 (ALTERNATE EDUCATION): Applicant shall have completed at least two years (60 semester hours) of courses in an institution accredited by a recognized regional or national accreditation agency¹, including at least 25 semester hours of coursework across various subjects related to the clinical laboratory sciences, such as courses in chemical or biological science, mathematics and/or computer science (no more than 6 semester hours of mathematics and/or computer science may be used toward the 25 semester hour requirement) AND shall have completed a minimum of six months of approved clinical laboratory experience.

ROUTE 3 (MILITARY): Applicant shall have completed a 50-week US military medical laboratory training program provided that the training credits were earned in, or have been accepted for transfer by, an accredited college or university leading to the award of an appropriate degree.^{2,3}

ROUTE 4 (OTHER RECOGNIZED EXAM): Applicant shall have taken and passed a generalist MLT examination given by another certification organization or state licensure agency, provided that the examination has been approved by the AMT Board of Directors and that the applicant can meet eligibility Routes 1, 2 or 3. Applicant must be currently employed or have recent experience (working three of the last five years) as a medical laboratory technician. No exam is required.”

Medical Laboratory Science Certification – AMT

“**ROUTE 1:** Applicant shall possess a baccalaureate degree in medical technology from a program or institution accredited by a recognized regional or national accreditation agency.

Additional Requirements:

- Recognized regional or national accreditation agency: agency must be approved by the US Department of Education, the Council for Higher Education Accreditation or otherwise approved by the AMT Board of Directors
- Educational programs acceptable toward meeting certification requirements must include laboratory experience as part of the curricula. Applicants graduating from programs that do not include an experiential component must obtain and document evidence of one year of approved laboratory experience prior to being eligible for certification.
- Applicants seeking certification under Routes 1 and 2 must have graduated from their degree program within the past five years. Applicants graduating longer than five years from date of application must provide evidence of one year of full-time (or equivalent) approved laboratory experience within the last five years.
- **Approved Clinical Laboratory Experience:** All laboratory experience credited toward eligibility must have been gained while employed in a laboratory that performs the chemical, physical, or biological examination of human body fluids and tissues and that uses clinical laboratory techniques and methodologies. The experience must have been obtained within the last five years, in at least four of the following six clinical laboratory disciplines: Blood Banking, Microbiology, Chemistry, Immunology, Hematology and Clinical Microscopy. All work experience is assumed to be full-time. Full-time experience is defined as working an average of 40 hours/week (may be a combination of part-time settings). Where required laboratory experience will be verified.

ROUTE 2: Applicant shall possess a baccalaureate degree from an institution accredited by a recognized regional or national accreditation agency, or an equivalent degree from a foreign institution as certified by a foreign transcript evaluation agency approved by AMT, **AND** shall have completed at least 35 semester hours of coursework across various subjects related to the clinical laboratory sciences, such as biological science, microbiology, organic chemistry, biochemistry, mathematics, etc., **AND** shall have either:

1. Completed an accredited medical technology training program following the earning of the baccalaureate degree referenced above, **OR**
2. Completed a minimum of one year of approved clinical laboratory experience

Additional Requirements:

- Recognized regional or national accreditation agency: agency must be approved by the

US Department of Education, the Council for Higher Education Accreditation, or otherwise approved by the AMT Board of Directors.

- Educational programs acceptable toward meeting certification requirements must include laboratory experience as part of the curricula. Applicants graduating from programs that do not include an experiential component must obtain and document evidence of one year of approved laboratory experience prior to being eligible for certification.
- Applicants seeking certification under Routes 1 and 2 must have graduated from their degree program within the past five years. Applicants graduating longer than five years from date of application must provide evidence of one year of full-time (or equivalent) approved laboratory experience within the last five years.
- **Approved Clinical Laboratory Experience:** All laboratory experience credited toward eligibility must have been gained while employed in a laboratory that performs the chemical, physical, or biological examination of human body fluids and tissues and that uses clinical laboratory techniques and methodologies. The experience must have been obtained within the last five years, in at least four of the following six clinical laboratory disciplines: Blood Banking, Microbiology, Chemistry, Immunology, Hematology and Clinical Microscopy. Where required, laboratory experience will be verified.

ROUTE 3: Applicant shall have taken and passed a generalist MT examination given by another certification organization or state licensure agency, provided that the examination has been approved by the AMT Board of Directors and that the applicant can meet eligibility Routes 1 or 2. Applicant must be currently employed or have recent experience (working three of the last five years). No exam is required.”

<http://americanmedtech.org/Certification/MedicalLabTechnician/ApplyforCertification.aspx>

Program Accreditation

The Medical Laboratory Technician Program (MLT) has been awarded Initial Accreditation status by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018. www.naacls.org, info@naacls.org, (P) 773-714-8880, (F) 773-714-8886.

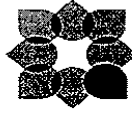
The Medical Laboratory Science Program (MLS) has applied for Initial Accreditation status by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018. www.naacls.org, info@naacls.org, (P) 773-714-8880, (F) 773-714-8886.

Infectious Disease Management Policy

1. All new students entering the MLT & MLS programs will be educated regarding proper procedures and general OSHA rules to follow when handling potentially infectious and hazardous materials
2. All incoming students will sign a statement of acknowledgement indicating they understand the risks and policies regarding infectious disease and hazardous material.
3. All students will be educated about necessary immunizations, including the Hepatitis B vaccine, and will be required to begin the series, verify immunity or sign a waiver stating their decision not to do so.
4. All students will have documentation of proof of immunity for major communicable diseases as required by the College and clinical assignments within two weeks of beginning the semester that immediately precedes the clinical semester of study.
5. Faculty will monitor all procedures and manipulations that could create aerosols and droplets and students will be required to wear safety goggles or work behind safety shields.
6. All body fluids and kits using human products will be treated as potentially infectious materials management.
7. Pipetting by mouth will not be allowed in the laboratory.
8. All blood samples; body fluids and kits are to be disposed of in appropriately marked containers following OSHA blood borne pathogen policies.
9. All needles and syringes are to be disposed of in biohazard puncture resistant containers.
10. Frequent hand washing will be enforced, and is mandatory beginning and following each laboratory section.
11. Bench tops and sinks will be cleaned with approved disinfectant before and following each laboratory exercise.
12. Accidental spills will be cleaned promptly using appropriate safety procedures, and the area then disinfected with approved disinfectants.
13. Gloves are mandatory for all laboratories in which biologically hazardous materials are being handled.
14. Program faculty will supervise all blood drawing practice sessions.
15. Any student who should not undergo phlebotomy either for personal or medical reasons will be excused from this procedure.
16. There will be absolutely no eating (including gum chewing), drinking, applying of cosmetics, adjusting contact lenses, chewing on pencils or pens, cell phone use, tablet use (unless approved covering is utilized) or smoking during student laboratories.
17. No food or drink is allowed in any laboratory where biological samples or hazardous chemicals may be present.

Infectious Disease Disclaimer

Students must adhere to prescribed safety measures and follow standard precautions when working with patients or clients, blood and body fluids either in the school laboratory or in the actual clinical setting. Faculty cannot assume the responsibility for assigning students to work with blood or body fluids that are free from communicable diseases such as HIV or hepatitis. It is the responsibility of the student to work safely and take the proper safety precautions so as not to contract such diseases. Brookline College, its faculty, and clinical agencies will NOT be held liable for accidents, injuries, or infections incurred by students during their course of study.



BROOKLINE COLLEGE
YOUR SUCCESS STARTS HERE

**GENERAL ASSUMPTION OF RISK
AND RELEASE OF LIABILITY**

I _____, freely choose to participate in the **volunteering for injections, venipuncture, capillary puncture, urinalysis, donation of bodily fluids for possible testing in the laboratory.** (Henceforth referred to as the "Program"). In consideration of my participation in this Program, I agree as follows:

RISK INVOLVED IN PROGRAM: (Specific dangers endemic in the Program's activity).

Risk of possible swelling, redness, discomfort, bruising (hematoma) and/or infection at the site. I also state truthfully that I am over the age of 18.

HEALTH and SAFETY: I have been advised to consult with a medical doctor with regards to my personal medical needs. I state that there are no health-related reasons or problems that preclude or restrict my participation in this Program. I have obtained the required immunization, if any.

I recognize that the College is not obligated to attend to any of my medical needs, and I assume all risks and responsibilities therefore. In case of medical emergency occurring during my participation in the Program, I authorize in advance the representative of the College to secure whatever treatment is necessary, including the administration of an anesthetic and surgery. The College may (but not obligated to) take any action it considers to be warranted under the circumstances regarding my health and safety. Such actions do not create a special relationship between Brookline College and me. I release Brookline College, its officers, officials, employees, volunteers, students, assigns all liability for any bodily injury or damage I sustain as a result of any medical care that I receive resulting from my participation in Program, as well as any medical treatment decisions or recommendations made by an employee or agent of Brookline College. I agree to pay all expenses relating thereto and release the College from any liability of any actions.

ASSUMPTION OF RISK AND RELEASE of LIABILITY: Knowing the risks described above, and in voluntary consideration of being permitted to participate in the Program, I agree to release, indemnify, and defend the College and their officials, officers, employees, agents, volunteers, sponsors, and students from and against any claim which I, the participation, my parent's or legal guardian or any other person may have for any loss, damages or injuries arising out of or in connection with participation in this Program.

SIGNATURE: I indicate that by my signature below that I have read the terms, conditions of participation, and agree to abide by them. I have carefully read this Release Form and acknowledge that I understand it. No representation, statements, or inducements, oral or written, apart from the foregoing written statement, have been made. This Release Form shall be governed by the laws of the State of Arizona, which shall be the forum for any lawsuit filed under or incident to this Release Form or to the Program. If any portion of this Release Form is held invalid, the rest of the document shall continue in full force and effect.

Signature _____

Date _____

Revised 2/18/2011

This form must be signed and returned to the Program Director prior to volunteering to be a donor for any phlebotomy procedures, including capillary or venipunctures.



MLT & MLS Program Statement of Acknowledgement

I, _____,
(print your full name)

have read and understand the information provided in the *Brookline College Catalog and the Medical Laboratory Department Student Handbook*, including:

- Mission, Goals and Graduate Outcomes
- Essential Functions of a MLT & MLS
- Grading Policy including attendance requirements
- Clinical Experience Policy
- Infectious Disease Management Policy and Disclaimer
- General Assumptions of Risk

I acknowledge that I understand the risks involved in the field of laboratory science, and I understand the safety policies in place and agree to follow the safety related instructions of my program faculty and supervisors. If I have any questions I agree to consult with Brookline College Program Director, Student Services Representative or other recognized authority.

Student Signature

Date

This form must be signed and returned to the Program Director before the end of the first week of the first semester of attendance.

Appendix A

Clinical Experience Affiliated Agencies

This list represents institutions who have a current affiliation agreement with Brookline College MLT and/or MLS Program. This list does not guarantee student placement at a particular location.

Arrowhead Hospital – Abrazo Health Care
18701 North 67th Avenue
Glendale, AZ 85308

Paradise Valley – Abrazo Health Care
3929 E. Bell Road
Phoenix, AZ 85032

Cobre Hospital, Globe
5880 S Hospital Dr.
Globe, AZ 85501

Desert Labs, Inc
1343 N Alma School Road, #150
Chandler, AZ 85224

Kindred Hospital, Phoenix
40 E Indianola Ave
Phoenix, AZ 85012

LabXpress, Inc
505 W McDowell Road
Phoenix, AZ 85003

Luke AFB
7219 N Litchfield Rd
Luke AFB, AZ 85309

Phoenix VA Healthcare System
650 E. India School Road
Phoenix AZ 85012-1892

Northern AZ VA Healthcare System
500 N Highway 89
Prescott, AZ 86313

Appendix B

Faculty List

Andrea G. Gordon, M.Ed., MT(ASCP)SH
MLT/MLS Program Director

Karen Farner, M.S., MT(ASCP)
MLT/MLS Lead Instructor

Roger Beckering, M.Ed., MLT(ASCP)
MLT/MLS Instructor

Thomas Sebastian, Ph.D., MB(ASCP)
MLS Adjunct Instructor

Dawn Bartlett, B.S., MT(AMT)
MLT/MLS Adjunct Instructor

Laurie “Diane” Fuller, B.S. MT(ASCP)
MLT/MLS Adjunct Instructor

Rory Huschka, M.Ed., B.S. MT(ASCP)
MLT Adjunct Instructor

Behnam Emami, PhD, MLS(ASCP)
MLT/MLS Adjunct Instructor