

Program Handbook

University of Rochester Medical Center Clinical/Medical Laboratory Technology Advanced Certificate Program



SCHOOL OF MEDICINE & DENTISTRY

**DEPARTMENT OF PATHOLOGY AND
LABORATORY MEDICINE**

STRONG MEMORIAL HOSPITAL



PROGRAM HANDBOOK

I. THE INSTITUTION

The University of Rochester, founded in 1850, has developed into one of the country's leading private research universities, classified as a doctoral university – highest research activity. The University is a small but highly complex institution composed of six schools: the College of Arts, Sciences, and Engineering, the Margaret Warner Graduate School of Education and Human Development, the William E. Simon Business School, the Eastman School of Music, the School of Medicine and Dentistry (SMD), and the School of Nursing as well as a number of world-class facilities such as the Laboratory for Laser Energetics, the Mees Observatory, and the Memorial Art Gallery, which support the University's educational, research, and service agendas. The University has enjoyed continuous accreditation by the Middle States Commission on Higher Education since 1921, and was last re-affirmed in 2014. In addition to University-wide accreditation, each professional school regularly undergoes its own specialized review and accreditation.

The University currently enrolls approximately 6,100 undergraduate students and 3,450 full-time and part-time graduate students, and has 1,261 full-time tenure-track faculty. The Advanced Certificate Program in Clinical/Medical Laboratory Technology operates within the University of Rochester Medical Center (URMC). URMC is part of the University of Rochester and includes the operation of the School of Medicine and Dentistry, Strong Memorial Hospital, Golisano Children's Hospital at Strong, and Eastman Dental Center. With staff and affiliates numbering over 30,000 the University has become the Rochester area's single largest employer.

The School of Medicine and Dentistry offers graduate level programs, including: medical doctorates; residency programs; fellowships; Ph.D. programs; master's degree programs; and advanced certificate programs. Graduate Education is a division within the School of Medicine and Dentistry and is responsible for overseeing the following processes within the program: applications, admissions, enrollment, course registration, records retention, tuition remittance, student services and graduation.

Strong Memorial Hospital (SMH) accommodates 830 acute care inpatients and has over 39,000 annual admissions. In addition to routine care, SMH also specializes in: organ transplant, trauma and burn care, neonatal intensive care, comprehensive neuro-medicine, complex cardiology and cancer services.

The Department of Pathology and Laboratory Medicine (also referred to as UR Medicine Labs) is a division of URMC that provides clinical laboratory services to Strong Memorial Hospital and its affiliates. UR Medicine Labs is the largest medical laboratory in the region with 950 members including but not limited to: 56 pathologists, 320 licensed laboratory professionals, and over 300 employees in pre-analytic operations. The department encompasses: 28 clinical laboratories, 16 research laboratories, 5 satellite laboratories for the Wilmot Cancer Center, a Pathology Residency Program and a PhD program in Pathology. In 2017 the department analyzed over 7.4 million clinical samples.

UR Medicine Labs provides the personnel, faculty, lecture space, clinical training space, support personnel, finances, laboratory equipment, tools, and supplies necessary to support the program mission. Each entity at the University of Rochester fulfills a critical role and all work together to ensure the successfulness of the Advanced Certificate Program in Clinical/Medical Laboratory Technology.

II. ABOUT THE PROGRAM

Faculty instructors are personnel from the Department of Pathology and Laboratory Medicine, including: associate and assistant professors of the School of Medicine and Dentistry, administrative directors, clinical laboratory supervisors, and appropriately licensed and certified laboratory

technologists. In addition numerous administrative support personnel assist the program director and faculty with associated program functions including processing financial requests, record retention, creation of recruitment material, entering program materials into learning management systems, scheduling meetings, transcribing outcome data, etc. The program website is found here:

<https://www.urmc.rochester.edu/education/graduate/certificate/clinical-medical-technology-certificate.aspx>

III. PROGRAM DETAILS

The program is designed to provide graduates with the entry level competencies required to succeed in the Clinical Laboratory. Students gain understandings of clinical laboratory science by correlating diagnostic findings with diagnosis, prognosis, and disease management of patients in the clinical setting.

Students grasp in depth concepts in the following core areas: clinical chemistry, clinical hematology and hemostasis, immunohematology, microbiology, and urinalysis and body fluids.

Graduates must pass the American Society of Clinical Pathology Board examination and achieve a state license to practice the profession of Clinical Laboratory Technology in the state of New York State.

LENGTH: 2 semesters/ 35.5 credits

FALL SEMESTER SCHEDULE: 18 weeks of instruction beginning the third full week in August through the end of the third full week in December. Thanksgiving Day and the following Friday are vacation days.

SPRING SEMESTER SCHEDULE: 18 weeks of instruction beginning the first full week in January with a week of vacation during spring break. Commencement is on the last week of the semester.

CONTACT: Vicki Roberts, Program Director and Manager of Education, Department of Pathology and Laboratory Medicine, 601 Elmwood Avenue, Box 626, Rochester, NY 14642

Vicki_Roberts@URMC.ROCHESTER.EDU

IV. PROGRAM MISSION AND GOALS

Our Mission-The Advanced Certificate Program in Clinical/Medical Technology at the University of Rochester strives to educate future clinical laboratory technologists who are committed, dedicated, skilled and innovative in their work. We seek to achieve this goal by utilizing educational experiences that emphasize patient care in the cultivation of excellence, competency, teamwork, and integrity in all aspects of laboratory science.

Program Goals-Upon completing the Advanced Certificate Program in Clinical/Medical Laboratory Technology, graduates will:

- a. Have knowledge of and adhere to institutional, regional, national and international safety regulations in the clinical laboratory setting.
- b. Achieve the full range of competencies as entry level clinical laboratory technologists in the following domains: clinical chemistry; hematology/hemostasis, urinalysis, & body fluids; immunohematology/transfusion medicine; immunology; microbiology; and laboratory management & operations.

- c. Accurately correlate laboratory findings to the diagnosis, prognosis, and disease management in the clinical and/or research setting.
- d. Effectively troubleshoot outcomes that do not conform to prescribed protocols or outcomes.
- e. Demonstrate leadership capabilities. Have knowledge of the basic principles of management, education, regulatory oversight, quality management, continuous process improvement, and operations in the clinical laboratory setting.
- f. Meet the licensure requirements in practice of Clinical Laboratory Technology in the state of New York.
- g. Be eligible for certification by the ASCP as Medical Laboratory Scientists (when the program has reached “serious applicant status” in the NAACLS accreditation process).

V. COURSE DESCRIPTIONS

CMT 401: ESSENTIALS OF CLINICAL LABORATORY SCIENCE (3 cr.) *Fall Semester*

This course is offered in the first 5 weeks of the program beginning in the Fall semester and the schedule is Monday through Friday; 8:30am-4pm. The learning model is wrap around lecture followed by hands on laboratory experiences. The total number of hours including lecture and lab experiences is 150. In class didactic contact time is 37.5 hours. The methods used are largely student centered laboratory exercises designed to prepare students for the clinical practicum. Didactic time is limited to the practical knowledge required for students to competently engage in laboratory activities.

- a. Overview:
 - Orientation-Program Overview; Review of Student Handbook and Policies: ½ day
 - Clinical Laboratory Safety; Infection Control; Universal Precautions; Ethics and Data Integrity: ½ day
 - Pre-analytic Techniques and Patient Safety Goals: ½ day
 - Phlebotomy: ½ day
- b. Basic Laboratory Techniques in the content areas listed below (with approximate number of days spent on each subject indicated).
 - Clinical Chemistry: 5 days
 - Clinical Hematology: 5 days
 - Immunohematology and Transfusion Medicine: 5 days
 - Clinical Microbiology & Serologic Techniques: 6 days
 - Renal Physiology and Urinalysis: 2 days

CMT 402: CLINICAL PRACTICUM I (7 cr.) *Fall Semester*

This clinical practicum is 325 hours in the fall semester beginning immediately after the 4 weeks of CMT 401 are completed. (The lectures for the non-clinical courses are offered 8-10 hours per week outside of this course.) The schedule will be available before course registration begins.

This course is entirely composed of supervised clinical experiences scheduled in the following disciplines: Blood Bank and Transfusion Medicine, Clinical Chemistry, Clinical Hematology & Hemostasis, Clinical Microbiology, Urinalysis, Immunology/Serology, Histopathology, Phlebotomy, and Laboratory Management and Operations. Didactic time is limited to the practical knowledge required for students to meet targeted learning outcomes and to achieve competency in the clinical laboratory procedures and protocols as assigned. Students are supervised throughout these experiences by a NYS Licensed Clinical Laboratory Technologist.

CMT 403: CLINICAL PRACTICUM II (8.5 cr.) *Spring Semester*

This clinical practicum is 425 hours in the spring semester. (The lectures for the non-clinical courses are offered 8-10 hours per week outside of this course.) The schedule will be available before course registration begins.

This course is entirely composed of supervised clinical experiences scheduled in the following disciplines: Blood Bank and Transfusion Medicine, Clinical Chemistry, Clinical Hematology & Hemostasis, Clinical Microbiology, Urinalysis, Immunology/Serology, Histopathology, Phlebotomy, and Laboratory Management and Operations. Didactic time is limited to the practical knowledge required for students to meet targeted learning outcomes and to achieve competency in the clinical laboratory procedures and protocols as assigned. Students are supervised throughout these experiences by a NYS Licensed Clinical Laboratory Technologist.

CMT 404: SPECIAL TOPICS IN CLINICAL LABORATORY SCIENCE (0.5 cr.) Spring Semester

This course offers 7.5 hours of traditional didactic material. The format used for this course is seminar style whereby faculty experts are invited to lecture on specialty topics of Laboratory Sciences, including: Tissue Typing-HLA, Advanced Molecular Diagnostic Studies, Cytogenetics and Micro-Array.

Readings and lectures are designed to provide students with basic understandings of the diagnostic tests provided by these departments and the scientific principles of the methodologies. Students will also make correlations between test results and diagnosis, prognosis and disease management.

CMT 405: LABORATORY MANAGEMENT AND OPERATIONS (0.5 cr.) Spring Semester

This course offers 7.5 hours of traditional didactic material and 25 hours observing real world operational and management initiatives in the department of pathology. Learning outcomes are evaluated by assessing project work either in groups or independently.

This course provides learning experiences in the following topics: operations, laboratory informatics, finance, education, licensure, leadership and professional development, quality systems management including inspection readiness and laboratory compliance. The following principles are also included: LEAN in the clinical pathology practice, instrument/assay validation, staff competencies and preparedness, patient safety, and compliance. Topics are presented in lecture format. Students are provided with a list of required out of class assignments and the opportunity to choose a group project from a list of management topics.

CMT 411: CLINICAL CHEMISTRY I (2 cr.) Fall Semester

This is a 30 hour didactic course that provides the cognitive foundation required for students to competently apply clinical chemistry principles to the practice of clinical laboratory science. This is the first course in a series of two clinical chemistry courses in the program.

Clinical and analytical correlations are organized by analyte, including: amino acids and proteins; non-protein nitrogen compounds; enzymes; carbohydrates; lipids and lipoproteins; electrolytes; blood gases, pH, and buffer systems; and trace and toxic elements (including the spectrometry, atomic absorption spectroscopy, and alternative analytical techniques). The chemical principles of each analyte are presented in a situational learning model that makes correlations: to disease states, interpretations of data, problem solving, and quality assurance in addition to other real world aspects of the clinical chemistry laboratory.

CMT 412: CLINICAL HEMATOLOGY I (1.5 cr.) Fall Semester

This is a 22.5 hour didactic course that provides the cognitive foundation required for students to competently apply clinical hematology principles to the practice of clinical laboratory science. This is the first course in a series of two clinical hematology courses in the program.

Course content: This course picks up where MT 401 leaves off on the topic of clinical and analytical correlations to the complete blood count and peripheral blood smear examination. From there the course covers in depth discussions on hematologic disorders, including: anemia and hemolytic anemia; additional types of anemia; etiology, pathophysiology, clinical findings, laboratory findings, and therapy. The next unit covers: nonmalignant disorders of leukocytes; hematopoietic neoplasms; classification, terminology, pathophysiology of neoplasms; and the laboratory's role in diagnosis and therapy. The final unit is on: stem cell therapy; molecular studies of neoplastic disorders; flow cytometry; and cytogenetics. Interpretations of data, problem solving, and quality assurance in addition to other real world aspects of the clinical hematology laboratory are woven throughout the course.

CMT 413: PRINCIPLES OF IMMUNOHEMATOLOGY I (1.5 cr.) Fall Semester

This is a 22.5 hour didactic course that provides the cognitive foundation required for students to competently apply clinical immunohematology principles to the practice of clinical laboratory science. This is the first course in a series of two immunohematology courses in the program.

This course picks up where MT 401 leaves off on the fundamental concepts of immuno-hematology and leads into the concepts of molecular biology as they relate to: red cell genotyping; the genetic basis of blood groups including blood group polymorphisms; the ABO blood group system; and serologic testing. The Rh blood group system is the next topic in this unit covering the detection of Rh antibodies and antigens and clinical considerations. The Landsteiner Wiener Blood Group systems are also studied. The second unit covers the antiglobulin test including: the biochemical composition of antihuman globulin (AHG) reagents and differentiation between polyspecific and monospecific reagents and their purpose; principles of the indirect antiglobulin test and the direct antiglobulin test; and factors affecting the antiglobulin test including sources of error, modification techniques. The third unit is on blood group terminology and other blood groups. Interpretations of data, problem solving, and quality assurance in addition to other real world aspects of the clinical blood bank and transfusion laboratory are woven throughout the course.

CMT 414: CLINICAL LABORATORY MICROBIOLOGY I (2.5 cr.) Fall Semester

This is a 37.5 hour didactic course that provides the cognitive foundation required for students to competently apply the principles of clinical microbiology to the practice of clinical laboratory science. This is the first course in a series of two clinical microbiology courses in the program.

Course principles are presented in a situational learning model correlating clinical pathological findings with interpretations of data, problem solving, and quality assurance in addition to other real world aspects of the clinical microbiology laboratory. This course is a continuation of MT 401 and begins with the general principles of clinical bacteriology as they relate to: identification of gram positive and gram negative cocci; gram positive bacilli; gram negative bacilli and coccobacilli; gram negative cocci; anaerobic bacteriology. Correlations will be made to pathophysiology and diagnosis by organ systems, such as infections of the: bloodstream; lower respiratory system; upper respiratory tract; meninges, encephalitis and other central nervous system infections; urinary tract; genital tract; gastrointestinal tract; skin, soft tissue and wounds; otherwise sterile body fluids, bone marrow and solid tissues.

CMT 421: CLINICAL CHEMISTRY II (2 cr.) Spring Semester

This is a 30 hour didactic course that provides the cognitive foundation required for students to competently apply clinical chemistry principles to the practice of clinical laboratory science. This is the second course in a series of two clinical chemistry courses in the program.

Clinical and analytical correlations are organized by organ system, including: the immune system; hypothalamic and pituitary functions; adrenal functions; gonadal functions; the thyroid gland; calcium hemostasis and hormonal regulation; liver function; cardiac function and laboratory markers for cardiac disease; pancreatic and gastrointestinal function, and body fluid analysis (amniotic fluid, cerebral spinal fluid, sweat, synovial and serous fluids). Therapeutic drug monitoring and drugs of abuse will also be included. The chemical principles of for assessment of organ systems functions are presented in a situational learning model that makes correlations: to disease states, interpretations of data, problem solving, and quality assurance in addition to other real world aspects of the clinical chemistry laboratory.

CMT 422: CLINICAL HEMATOLOGY II (2 cr.) Spring Semester

This is a 30 hour didactic course that provides the cognitive foundation required for students to competently apply clinical hematology principles to the practice of clinical laboratory science. This is the second course in a series of two clinical hematology courses in the program.

The first unit of this course provides an in depth study of morphologic analysis of body fluids from a hematologic perspective, including: urine, serous, synovial, cerebral spinal fluid, semen analysis, and joint fluids.

The second unit covers primary hemostasis with discussions of the vascular system and platelets in hemostasis. Secondary hemostasis is also covered and includes an in-depth discussion of: the coagulation mechanism; procoagulant factors; the coagulation cascade; fibrinolytic system; and the control mechanisms of hemostasis.

The final unit for this course covers the disorders of primary hemostasis, including the following topics: diagnosis of bleeding disorders; disorders of the vascular system; and platelet disorders. Interpretations of data, problem solving, and quality assurance in addition to other real world aspects of the clinical hematology laboratory are integrated throughout the course content.

CMT 423: PRINCIPLES OF IMMUNOHEMATOLOGY II (2 cr.) Spring Semester

This is a 30 hour didactic course that provides the cognitive foundation required for students to competently apply the scientific principles of immunohematology to the practice of clinical laboratory science. This is the second course in a series of two immunohematology courses in the program.

The first unit of this course begins with blood group terminology and leads into the detection and identification of antibodies in the clinical setting, including: the antibody screen; antibody detection; additional techniques for resolving antibody identification; direct antiglobulin techniques and elution methods; antibody titration and providing compatible blood products . Pretransfusion testing is also covered in relation to: compatibility testing protocols; selection of appropriate donor units; crossmatch testing; and pretransfusion testing in special circumstances.

The next unit is on donor screening and component preparation technique including: governing agencies; donor screening; whole blood collection; donor reactions; donor records and processing; component preparation; plasma derivatives; and transfusion practices of packed red blood cells and blood products.

Unit three is on the adverse effects of blood transfusion and covers: the risks of transfusion; regulations; acute transfusion reactions; delayed transfusion reactions; transfusion related adverse events in special patient scenarios including neonatal transfusions. Hemolytic disease of the fetus and newborn; the HLA system and autoimmune hemolytic anemias are also covered here. Interpretations of data, problem solving, and quality assurance in addition to other real world aspects of the blood bank and transfusion medicine laboratory are integrated throughout the course content.

CMT 424: CLINICAL LABORATORY MICROBIOLOGY II (2.5 cr.) Spring Semester

This is a 37.5 hour didactic course that provides the cognitive foundation required for students to competently apply the principles of clinical microbiology to the practice of clinical laboratory science. This is the second course in a series of two clinical microbiology courses in the program.

This course begins with the general principles of clinical microbiology as they relate to laboratory techniques in the identification: of mycobacteria; parasitology; mycology; virology and other obligate intracellular and nonculturable bacterial agents; cell wall-deficient bacteria; spirochetes; serology of noninfectious clinical disorders; and serology of infectious clinical disorders. Correlations are made to pathophysiology and diagnosis by organ systems, such as infections of the: bloodstream; lower respiratory system; upper respiratory tract; meninges, encephalitis and other central nervous system infections; urinary tract; genital tract; gastrointestinal tract; skin, soft tissue and wounds; otherwise sterile body fluids, bone marrow and solid tissues.

VI. PROGRAM FACULTY

Program Director: [Vicki L. Roberts](#), MS, MT (ASCP), Associate Professor, Department of Pathology and Laboratory Medicine, School of Medicine and Dentistry, University of Rochester

Didactic Course Directors

Clinical Chemistry: [Tai C. Kwong](#), Ph.D., Professor, Department of Pathology and Laboratory Medicine, School of Medicine and Dentistry, University of Rochester

Clinical Hematology: [W. Richard Burack](#), M.D., Ph.D., Professor, Department of Pathology and Laboratory Medicine, School of Medicine and Dentistry, University of Rochester

Clinical Laboratory Microbiology: [Nicole D. Pecora](#), M.D., Ph.D., Assistant Professor, Department of Pathology and Laboratory Medicine, School of Medicine and Dentistry, University of Rochester

Immunohematology: [Scott Kirkley](#), M.D., Professor, Department of Pathology and Laboratory Medicine, School of Medicine and Dentistry, University of Rochester

Clinical Instructors-Content Specialists



Clinical Chemistry: Stacy Daley, MT (ASCP), B.S., Technologist Specialist-Chemistry, NYS Licensed Clinical Laboratory Technologist, Department of Pathology and Laboratory Medicine, Strong Memorial Hospital, University of Rochester

Clinical Hematology: Geoffrey Harris, MLS^{CM} (ASCP), MSBA, Technologist Specialist-Hematology, NYS Licensed Clinical Laboratory Technologist, Department of Pathology and Laboratory Medicine, Strong Memorial Hospital, University of Rochester

Clinical Laboratory Microbiology: Debra Jesien, MT (ASCP), B.S., Chief Supervisor-Microbiology, NYS Licensed Clinical Laboratory Technologist, Department of Pathology and Laboratory Medicine, Strong Memorial Hospital, University of Rochester and Lawrence Deacon, Technologist Specialist-Microbiology, NYS Licensed Clinical Laboratory Technologist, Department of Pathology and Laboratory Medicine, Strong Memorial Hospital, University of Rochester

Histology- Loralee McMahon HLT (ASCP), MS, Supervisor-Immunohistochemistry, NYS Licensed Clinical Laboratory Technologist, Department of Pathology and Laboratory Medicine, Strong Memorial Hospital, University of Rochester and Randy Todd, HT (ASCP), Medical Technologist II-Histology, NYS Licensed Clinical Laboratory Technologist, Department of Pathology and Laboratory Medicine, Strong Memorial Hospital, University of Rochester

Immunohematology: Heather Sassone, MT (ASCP), B.S., Technologist Specialist-Blood Bank and Transfusion Services, NYS Licensed Clinical Laboratory Technologist, Department of Pathology and Laboratory Medicine, Strong Memorial Hospital, University of Rochester

Phlebotomy: Latoya Sirmons, Phlebotomy Lead Instructor, Department of Pathology and Laboratory Medicine, Strong Memorial Hospital, University of Rochester

VII. ADMISSIONS REQUIREMENTS

- a. Students must have completed a Bachelor's degree in the biological, chemical or physical sciences with successful completion of the following courses and subject areas that include laboratory content :
 - inorganic chemistry
 - analytic chemistry and/or biochemistry
 - physiology, with anatomy content
 - molecular biology and diagnostics
 - microbiology
- b. The following courses are also required:
 - organic chemistry
 - statistics
 - immunology
- c. Applicants must have a minimum overall GPA of 3.0 with a minimum Math/Science GPA of 2.8.

VIII. APPLICATION REQUIREMENTS

- a. Fulfill online application requirements
- b. Copy of Transcript/s (official transcript will be required after the interview)
- c. 2 Letters of Recommendation

- d. CV, resume or personal statement
- e. \$60 application fee

IX. RESTRICTIONS

- a. The courses are restricted to students matriculated in the Clinical/Medical Laboratory Technology Advanced Certificate Program unless prior approval is granted by the program director.
- b. The program minimum number of students is 1 and the maximum number is 16.
- c. Students that do not meet learning outcomes and targeted competencies as described in Section VII. must obtain approval from the program director to continue in the program.

- X. TEXTBOOKS AND RESOURCES:** Details will be made available on the syllabi prior to the start of the semester.

XI. ASSESSMENT OF STUDENT PERFORMANCE

- a. Courses are not offered on a pass/fail basis.
- b. To be in good academic standing students must maintain a weighted average of 75% in the program.
- c. Students must attain a 70% minimum score on the quizzes and projects. Any student achieving less than a 70% will have an opportunity to remediate and take the quiz a second time to provide evidence that they have achieved the learning objectives targeted by the exam. Students will also be provided an opportunity to resubmit projects that are initially below the 70% minimum.
- d. The final grade determination for each course is a letter grade and calculated as follows:

Grades are calculated out to a tenth of a percentage point and equal to or above 0.5% will be rounded up to the nearest whole number whereas "equal to or below" 0.4% is rounded down to the nearest whole number.

A = 95, 96, 97, 98, 99, 100 (Excellent)
A- = 90, 91, 92, 93, 94
B+ = 85, 86, 87, 88, 89
B = 80, 81, 82, 83, 84 (Good)
B- = 75, 76, 77, 78, 79
C = 70, 71, 72, 73, 74 (Poor)
E is less than or equal to 69 (Failing)

- e. Should a student drop out of the program and wish to return the following academic year they will need to reapply to the program. If accepted to the program the student will need to pay the going flat tuition rate for the academic year that they are scheduled to return.
- f. Should a student fail a course, they will be placed on academic probation. An individualized remediation plan will be assigned by the Program Director and the Program Medical Director.
- g. In the event that the student must retake a course, they will need to pay for the course again at a pro-rated, per credit hour cost.

XII. EVALUATION METHODS

- a. Student learning is evaluated in the cognitive, psychomotor and affective domains. Assessments and learning objectives are provided in the course syllabi. Successfulness of learning outcomes will be evaluated based on the class performance in clinical rotations, quizzes and projects. Improvements will be implemented on a continuous basis as gaps are

- identified. Students will also be evaluated on their professional behaviors and clinical competency.
- b. Educators will use turning technology to anonymously gauge the in class learning outcomes by incorporating assessment checkpoints into presentations; modifying instruction as needed.
 - c. Anonymous course evaluations will be implemented at the conclusion of the course to provide insights into the students' perception of the experiences; i.e. the laboratory resources, instructors' abilities, textbooks, learning activities, and alignment of learning objectives to learning experiences.
 - d. Action plans to enhance learning outcomes will be implemented as required.

XIII. PROGRAM POLICIES

- a. Graduate students are expected to be on site at the medical center from 8am to 4:30pm Monday through Friday (with the exception of the first 4 weeks when instruction begins at 8:30am and ends at 4pm) unless otherwise indicated by program leadership. This schedule is carefully configured to meet state and national requirements for both clinical and lecture hours.

Three weeks of vacation are built into the schedule. Two weeks occur just prior to the start of spring semesters and one week falls in the middle of spring semester. Graduate students are permitted to take up to 16 hours (or 2 days) of personal time per semester in hourly increments with advance notice. The written request must be made two weeks prior to the requested date/ time and must be made to the program director AND the clinical instructor. Advance notice provides adequate opportunities to schedule make-up experiences. Request forms are provided in the appendix.

Students missing more than 2 days in a row due to illness or other unplanned critical events are required to:

Submit a written explanation as to the program director that includes: the anticipated date of return; a list of missed experiences; and the approved make up schedule for those experiences (clinical instructor approval required).

Submit a doctor's excuse for absences due to illness for more than 2 consecutive days that provides the date the graduate student is medically cleared to resume normal activity (and return to the program).

In the event of a prolonged absence graduate students must adhere to the leave of absence policies found in the current Graduate Studies Bulletin entitled: [Regulations and University Policies Concerning Graduate Studies](#).

Noncompliance may result in dismissal from the program. A sample evaluation form is provided in the appendix.

Unscheduled absences (those that occur without prior advance notice) will be monitored. Absenteeism and a history of repeated requests to leave early without proper approval will result in remediation and may lead to dismissal from the program.

Graduate students must inform clinical instructors or the program director if they are unable to attend clinical rotations and/or lectures prior to the beginning of the shift. It is the expectation of the department that the graduate student report their absence directly to a departmental representative. Although it may be helpful to leave a voice mail or send an email, key instructors may not receive the message in a timely fashion. In some cases instruction to other students may be delayed until everyone is present.

Missed exams must be made up immediately upon the graduate student's return to the program.

Alerts for program closings due to dangerous travel conditions, power outages, or unexpected utility failures will be made directly to students as soon as the information becomes available.

- b. Attendance is mandatory. Students are permitted 2 sick days per semester and must make up practicums and exams within a reasonable time frame when they return to class. In the event that additional days are missed the student must:
 - Submit a written explanation within 2 days to the program director explaining the reason for the extended absence that includes an anticipated date of return with an approved (by the appropriate instructor) action plan detailing the makeup schedule for missed practicums and/or exams.
 - Submit a doctor's excuse for absences over 3 consecutive days with written approval to return to normal activities.
 - Submit a doctor's excuse for leave of absences due to a medical condition with a written statement that the student cannot return to the program for medical reasons.
 - Students that do not comply with these policies will be placed on academic probation or dismissed from the program at the discretion of the program director.
- c. Withdraws from the program will follow the University policy for tuition and fee refunds. The tuition refund policy can be viewed at the following URL:
<https://www.urmc.rochester.edu/education/graduate/home/forms/refund-schedule.aspx>
- d. Students that do not maintain a B- in all courses will be placed on academic probation.
- e. Grades of B- or better are required for satisfactory performance in the graduate program. One grade below B- in any course is cause for review of overall performance and will result in academic probation for the duration of graduate study. A second grade below B- is basis for dismissal from the graduate program. This information is found at the following link:
<https://www.urmc.rochester.edu/education/graduate/trainee-handbook/policies-benefits/c-or-below-grade-policy.aspx>.
- f. Grade appeals must be submitted in writing with a full explanation of the reason for dispute; a copy of the graded assessment; and references to course materials to support the claim.

Appeals will be reviewed by the Medical Director and Program Director. The outcome of the appeals will be returned within 2 weeks of submission of the required documents.

- g. As per the *University of Rochester Regulations and University Policies Concerning Graduate Studies*, academic honesty is taken very seriously and a central responsibility for all students. Suspected breaches are reported to the department chair and associate dean of graduate studies. Claims of academic misconduct will be reviewed by department leadership and if a breach is confirmed will result in penalties. Ignorance of this policy is not considered a valid excuse or defense. The full policy can be viewed at the following URL; on page 16: <http://www.rochester.edu/GradBulletin/PDFbulletin/Regulations.pdf>.

XIV. PUBLIC DISCLOSURES

NONDISCRIMINATION POLICY

“The University of Rochester values diversity and is committed to equal opportunity for persons regardless of age, color, disability, ethnicity, gender identity or expression, genetic information, marital status, military/veteran status, national origin, race, religion/creed, sex, sexual orientation or any other status protected by law. Further, the University complies with all applicable non-discrimination laws in the administration of its policies, admissions, employment, and access to and treatment in University programs and activities.”

More information, including information about resources that support the University’s commitment to equal opportunity, can be found at [Equal Opportunity at Rochester](#).

STUDENT LIFE

Publications on residential life and housing services are found here: <http://www.iso.rochester.edu/living/housing.html>

SCHOOL OF MEDICINE AND DENTISTRY, GRADUATE EDUCATION, ORIENTATION AND THE STUDENT HANDBOOK

<https://www.urmc.rochester.edu/education/graduate/trainee-handbook/graduate-students.aspx>

GRADUATE STUDIES OFFICIAL PUBLICATIONS:

<http://www.rochester.edu/gradstudies/publications.html>

- UNIVERSITY OF ROCHESTER GRADUATE BULLETIN-contact information and academic schedules
- REGULATIONS AND UNIVERSITY POLICIES CONCERNING GRADUATE STUDIES
 - Student Conduct –pp. 15
 - Affirmative Action, Equal Opportunity, and Antidiscrimination-pp. 15-18
 - An inclusive Community
 - Affirmative Action and Equal Employment Opportunity
 - Discrimination and Harassment
 - Sex-Based Discrimination and Harassment
 - Sexual Misconduct and Assault

- Disability Accommodation
- Disability Accommodation for Students
- Jurisdiction and Responsibility for Academic and Nonacademic Misconduct
- Academic Honesty Policy
- Judicial Process for Academic Misconduct

SEXUAL MISCONDUCT:

Policies, resources and instructions on reporting an incident with the contact information for the Title IX Coordinators is provided here: <https://www.rochester.edu/sexualmisconduct/>

DIVERSITY: <https://www.urmc.rochester.edu/education/graduate/trainee-handbook/diversity.aspx>

Reasonable Request for Accommodations Form

University Wide Diversity Resources

Affinity and Networking Groups

Annual Diversity Conference

Diversity Website

Other Diversity Events

Office for Faculty Development and Diversity

Statement of Educational Philosophy

Susan B. Anthony Institute

University of Rochester Veterans Alliance

School of Medicine and Dentistry Resources

Graduate Women in Science

Graduate Students of Color

The Spectrum Group List Serve (LGBT)

A list of National Organizations and Conferences

XV. ADDITIONAL POLICIES

- a. DRESS CODE: the dress code is business casual or scrubs in good condition. Footwear must have closed toes and in good condition. Lab coats must be worn at all times in clinical areas.
- b. CELL PHONE use is prohibited in clinical areas.
- c. STUDENTS must complete *Blood Borne Pathogen Training* as assigned by the Program Director.
- d. STUDENTS must have university issued ID badges at all times while on the medical campus.
- e. STUDENTS must adhere to the vaccination policies and occupational health policies.
- f. SERVICE WORK No student will perform or be expected to perform the duties of paid employees or instructors while engaging in the learning experiences required for completion of the program. Any volunteer activities are strictly noncompulsory and must be completed outside of regular program hours and within the provisions set forth by the



university policies. Students are not expected to pass an external board or certification examination in order to receive the certificate of completion for advanced study. These policies are published in the student handbook and made readily available to students and faculty.

- g. PROGRAM CLOSURES In the event of short term school closures (usually weather related) the student body will be alerted through the university emergency management system; public radio or communication from the program director. For long term program closures the program teach-out plan will be guided by the literature provided by our regional accreditor, the Middle States Commission on Higher Education (MSCHE). If the institute were to close electronic delivery of didactic instruction would continue through the BlackBoard Learning Management System. Students in the program would also greatly benefit from continued clinical instruction at hospital based laboratories of affiliated hospitals in the UR Medicine System. For a list of these affiliates please visit: <https://www.urmc.rochester.edu/patients-families/our-hospitals.aspx>.
- h. SUPERVISION Under the advisement and direction of the Program Director each clinical course (includes CMT 401; CMT 402 and CMT 403) is managed by an expert Medical Technologist Specialist in each clinical content area. Psychomotor objectives are delivered in clinical settings under the supervision of New York State Licensed Clinical Laboratory Technologists. The clinical hours and students' schedules are assigned by the Program Director.

XVI. ESSENTIAL FUNCTIONS

All students and applicants sign a waiver stating that they meet the technical standards and essential functions of the profession. This document provided in the appendix.

The signature below indicates that the student has read and understood the information provided in the student handbook. Students may also provide evidence of understanding in the BlackBoard Learning Management System by clicking the "mark reviewed" button under each content area.

STUDENT NAME (PRINT) _____

STUDENT SIGNATURE _____

DATE _____



APPENDIX A-AFFECTIVE DOMAIN EVALUATION SHEET

APPENDIX B-VACATION REQUEST FORM

APPENDIX C-ESSENTIAL FUNCTIONS DOCUMENT