

Master of Science

Clinical Laboratory Sciences



Rush University Medical Center is a major healthcare, teaching, and research complex located two miles west of downtown Chicago. Rush University is the academic component of Rush University Medical Center and includes the College of Health Sciences, the Graduate College, the College of Nursing and Rush Medical College. Rush University is dedicated to healthcare education and research and enrolls approximately 1,590 students.

Rush University health education programs are based on the practitioner-teacher model. In this model, classes are small and faculty members are up-to-date practitioners. Students enrolled in the Clinical Laboratory Sciences Master's Entry Level program will have the opportunity to learn state-of-the-art methodologies and instrumentation used in the divisions of Rush Medical Laboratories, as well as the clinical laboratories of affiliated hospitals, including Clinical Chemistry, Hematology, Microbiology, Molecular Diagnostics, Immunology and Immunohe-matology. Rush Medical Laboratories is fully accredited by state and national accrediting agencies with a staff of over 300 laboratory professionals and scientists. Because these laboratories are among the best reference and clinical laboratories in the Midwest, students have an opportunity to work with instruments and test procedures not available in smaller hospitals.

The Program

The Clinical Laboratory Sciences master's degree program at Rush University is designed for those whose baccalaureate degree is in a field other than Clinical Laboratory Science. Those entering the program achieve entry-level competency in Clinical Laboratory Science as well as acquire additional skills in problem solving, management, communication, and research.

The program is built around a core of basic and advanced theoretical knowledge and clinical practice. This combination of both theory and practice enhances the development of skilled, knowledgeable professionals who are flexible enough to function at a very high level of performance in the various laboratory settings available to graduates of the program. These areas include primary health care facilities, as well as research, educational, and commercial laboratory settings across the country.

The faculty members in Rush's Clinical Laboratory Sciences program do more than train technical healthcare personnel. Their program mission is to educate clinical laboratory professionals to meet the current and future demands of laboratory medicine.

The Clinical Laboratory Sciences program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS, 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415 Tel: 773-714-8880, Fax: 773-714-8886). Upon completion of the program, students are eligible to take the national certifying examinations given by the American Society of Clinical Pathology, Board of Registry and the National Credentialing Agency for Laboratory Personnel.

Rush University is fully accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, the regional accrediting association.

Program Structure

The curriculum for the Master of Science in Clinical Laboratory Sciences consists of core courses, clinical practica, research and general coursework. A full-time student should be able to complete the program in seven quarters taken within two years. (Students can begin their coursework in the Clinical Laboratory Sciences program in the Fall and Winter quarters of each year, although starting in the Winter may increase the overall length of the program.) Students who choose to take the program part-time must finish within 5 years.

The program is rigorous; students are required to maintain a 3.0 GPA on a 4.0 scale while in the program. Students will get hands-on experience in laboratory techniques and will develop a thorough knowledge base in clinical laboratory medicine providing a firm foundation for development and growth after graduation.

Students learn basic theories and skills in hematology, clinical chemistry, immunology, molecular diagnostics, immunohematology and clinical microbiology in their first year. The second year will consist of advanced courses and clinical practica in these areas.

The Professional Development sequence begins in the first year and continues during the second year. By participating in various projects, students learn the skills necessary to become a professional clinical laboratory Scientist. Students may visit different areas of the hospital to gain an appreciation of other healthcare professionals and to learn how other healthcare disciplines interrelate. They may also become involved in the community by judging science fairs at local grade schools and high schools or helping with a diabetic screening at a community center for the elderly.

During the second year, students, led by a clinical practitioner, will choose, develop and guide a project from its inception to completion. The culmination of this project will be the preparation of a manuscript suitable for publication in a professional journal.

Housing

The Office of Student Affairs provides housing information which outlines opportunities for on-campus housing as well as housing available near the Medical Center and in other areas of Chicago and its adjoining suburbs. Questions about housing should be directed to the Office of Student Affairs at 312-942-6302. You may also visit our website at www.rushu.rush.edu/studentlife/housing

Financial Aid

Rush University has a comprehensive financial aid program for students with demonstrated need. Financial aid is available in the form of grants, scholarships, loans, and work study opportunities.

For financial aid purposes the following projected expenses will be included in the student budget in addition to tuition (these figures are estimates based on 2007-2008 budget):

Tuition	\$5,634 per quarter
Living Allowance	\$5,040 per quarter
Books/Supplies	\$645 per academic year
Health Insurance	\$3,330 per academic year

Questions regarding financial aid should be directed to the Office of Student Financial Aid at 312-942-6256 or visit our website at www.rushu.rush.edu/finaid

Admission Guidelines

The following items are required for admission into the program:

Baccalaureate degree from an U.S. accredited college or university.

An overall GPA of 3.0 on a 4.0 scale. An applicant with a GPA of less than 3.0 may be considered but only under extenuating circumstances.

The Test of English as a Foreign Language (TOEFL) is required of all applicants whose native language is not English. Applicants who have taken the paper based TOEFL must also submit the Test of Written English (TWE) scores.

Submit official transcripts from each institution of higher education attended. Applicants who have attended an institution of higher education outside the United States must have their transcripts evaluated by Educational Credential Evaluators (ECE). Request a course-by-course evaluation of your foreign transcripts. Contact ECE at 414-289-3499 or at www.ece.org.

Completion of required prerequisite coursework. Coursework must include:

- 24 quarter hours or 16 semester hours of chemistry—*organic chemistry, quantitative analysis, and biochemistry recommended.*
- 18 quarter hours or 12 semester hours of biology—*anatomy and physiology, microbiology and genetics recommended.*
- 4 quarter hours or 3 semester hours of mathematics—*algebra and statistics recommended.*

The College Admission Services staff is available to advise applicants regarding the selection of the required prerequisite courses. Contact the office of College Admission Services at 312-942-7100 to determine if the previous or planned coursework is acceptable for the requirements of the pre-clinical laboratory sciences curriculum.

A personal interview is also required as a component of the admissions process. The Department of Clinical Laboratory Sciences Admissions Committee will make the final decision to accept an applicant into the masters program.

Students accepted to the Clinical Laboratory Sciences program must successfully pass a criminal background check.

Application Procedures

Submit the following items:

- Complete the on-line application at www.rushu.rush.edu/admiss/hlthadm.html
- Official transcripts from each institution of higher education attended. Applicants who have attended an institution of higher education outside the United States must have their transcripts evaluated by Educational Credential Evaluators (ECE). Request a course-by-course evaluation of your foreign transcripts. Contact ECE at 414-289-3400 or www.ece.org.
- Three letters of recommendation (a combination of former college or university faculty and current employer is preferred).
- All applicants whose native language is not English must submit TOEFL scores.

Application Deadline

No strict application deadline is set by the Department of Clinical Laboratory Sciences. However, applicants are advised to apply no later than May 1st, as a limited number of students are accepted into the program each year.

Term of Entry

Fall term preferred but applications may be considered for other terms of entry. Fall quarter begins in early September.

Equal Opportunity Policy

Discrimination or harassment against any member of the Rush University Medical Center community (i.e., employee, faculty, house staff, student, or patient) because of race, color, gender, sexual orientation, religion, national origin, ancestry, age, marital or parental status, disability as defined by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, or any other category protected by federal or state law is prohibited and will not be tolerated, nor will any person for those reasons be excluded from the participation in or denied the benefits of any program or activity within Rush University Medical Center or Rush University. For the academic sector, Beverly B. Huckman, Associate Vice President for Equal Opportunity in the Office of the President, has been designated to oversee the implementation of this policy. Ms. Huckman can be reached at (312) 942-7093, Suite 128, Professional Office Building.

Department of Clinical Laboratory Sciences Curriculum*

First Year

Fall Quarter

2	CLS 500	Laboratory Fundamentals
5	CLS 501	Clinical Chemistry I
5	CLS 510	Hematology IA
5	CLS 521	Immunology I
1	CLS 544	Professional Development I

18 quarter hours

Winter Quarter

5	CLS 530	Microbiology
3	CLS 502	Clinical Chemistry II
4	CLS 512	Body Fluids
1	CLS 545	Professional Development II
1	GCC 506	Biomedical Ethics

14 quarter hours

Spring Quarter

4	CLS 531	Parasitology, Mycology and Virology
3	CLS 511	Hematology IB
3	CLS 503	Clinical Chemistry III
5	CLS 520	Immunohematology
1	CLS 546	Professional Development III

16 quarter hours

Summer Quarter

5	CLS 533	Molecular Techniques
3	CLS 555	Supervision & Education
2	CLS 553	Communications
4-8		Clinical Practica**

14-18 quarter hours

*Curriculum is subject to change.

**May substitute Master Degree Projects

Note: Courses may not be offered in sequence listed.

Year Two

Fall Quarter

3	CLS 550	Laboratory Information and Automation Systems
2	CLS 522	Immunology II
2	HSM 510	Health Care in America
1	CLS 547	Professional Development IV
2	CLS 560	Research I
4-8		Clinical Practica
2	CLS 563	Masters Project I

16 - 20 quarter hours

Winter Quarter

2	CLS 532	Infectious Disease Case Studies
3	CLS 505	Quality Issues for CLS
2	CLS 561	Research Seminar II
2	CLS 564	Masters Project II
1	CLS 548	Professional Development V
4-8		Clinical Practica**

14-18 quarter hours

Spring Quarter

2	CLS 552	Regulatory Issues
3	CLS 567	Comprehensive CLS Review
2	CLS 562	Research Seminar III
2	CLS 565	Masters Project III
1	CLS 549	Professional Development VI
4-8		Clinical Practica**

14-18 quarter hours

Send transcripts and any supporting application documents to the address below.

For any further information contact:

College Admission Services
600 S. Paulina, Suite 440
Chicago, Illinois 60612-3869

Tel 312-942-7100

Fax 312-942-2219

E-mail Rush_Admissions@rush.edu

To apply on-line

www.rushu.rush.edu/admiss/hlthadm.html