# WHAT DOES A CLINICAL LABORATORY SCIENTIST DO?

The work of a clinical laboratory scientist involves a wide variety of responsibilities in several areas of laboratory medicine. Some of the tasks performed include:

- identification of infectious agents such as bacteria, viruses, fungi and parasites.
- analysis of blood to detect disorders such as leukemia, hemophilia and immune deficiency.
- measuring the presence of antibodies in blood to indicate disease.
- assuring the quality of blood for transfusions.

A career in clinical laboratory science provides the opportunity to work in diverse areas in the laboratory. Many of the diagnostic tests performed today involve the latest advances in molecular diagnostic testing, and clinical laboratory scientists use some of the most advanced and sophisticated equipment available to modern science.

In addition to conducting laboratory tests, the clinical laboratory scientist:

- ensures the quality of test data.
- compares and selects appropriate laboratory methods and instruments.
- provides physicians with information on the validity and significance of test results.
- supervises other laboratory personnel.



## Employment Outlook

There is a critical need for clinical laboratory scientists nationwide. The average starting salary in the Midwest is \$50,000, which is significantly higher than starting salaries for jobs in the basic sciences of biology, microbiology and chemistry. In addition, many employers provide signing bonuses due to the critical demand. Demand for clinical laboratory scientists is expected to increase even more in the future, making this discipline one of the most marketable areas in modern medicine.

Many clinical laboratory scientists work in hospitals and clinics, although there are other career opportunities:

- biotechnology and pharmaceutical companies
- medical research laboratories
- · public health agencies
- forensic laboratories
- · veterinary laboratories
- laboratory and pharmaceutical sales

In addition, a degree in clinical laboratory science provides an excellent background for medical school, veterinary school, graduate school in areas of medical science, or any area where a knowledge of health care and laboratory medicine is useful.

### www.uwlax.edu/clinlabsci

# UNIVERSITY OF WISCONSIN-LA CROSSE COLLEGE OF SCIENCE AND HEALTH

#### **CLINICAL LABORATORY SCIENCE DEPARTMENT**

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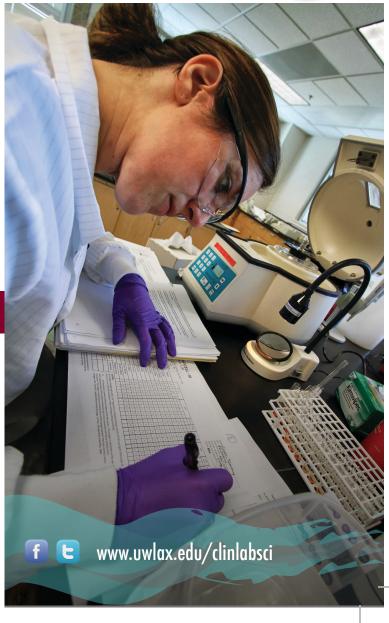
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#### UNIVERSITY OF WISCONSIN-LA CROSSE

### **CLINICAL LABORATORY SCIENCE**









## **CLINICAL LABORATORY SCIENCE**

#### WHAT IS A CLINICAL LABORATORY SCIENTIST?

Clinical laboratory scientists (medical laboratory scientists or medical technologists) are health-care professionals that play a vital role in modern medicine. Clinical laboratory scientists are extensively educated in all aspects of laboratory medicine. They are responsible for providing accurate information to physicians so they may:

diagnose, monitor and treat disease | monitor patient health | practice preventative medicine

It is estimated that 70 percent of all medical decisions made by physicians is based on the vital information provided by clinical laboratory scientists.



## Curriculum

Students who enjoy laboratory work and the challenge of identifying the cause of a patient's disease will find this curriculum to their liking.

In the first two years of the pre-professional phase, students receive a sound background in basic sciences with laboratory components to put course material into practice. Students then apply for the professional program in the spring of their sophomore year.

During their junior year, students complete the pre-clinical course work and general education requirements. In the fall of their junior year, students also apply to one or more of the accredited hospital-sponsored programs affiliated with UW-L.

The senior year of the program is spent at an accredited hospital-sponsored program where students receive extensive training using state-of-the-art clinical instrumentation. After successful completion of the hospital program, students receive a bachelor of science degree in clinical laboratory science and are eligible to sit for the national certification exam.

## Sample Curriculum

#### FIRST YFAR

**Fall Semester** 

General Chemistry I Algebra Analysis of Health, Wellness and Disease General Education course

**Spring Semester** 

Introduction to Biological Sciences General Chemistry II Introduction to Clinical Lab Sciences General Education course

#### **SECOND YEAR**

**Fall Semester** 

**Human Anatomy and** Physiology I Microbiology **Elementary Statistics** General Education course

**Spring Semester** 

**Human Anatomy and** Physiology II Immunology Lecture Survey of Organic Chemistry General Education course

#### THIRD YEAR

**Fall Semester** 

Hematology **Biochemistry** Immunology Lab **General Education** courses (3)

**Spring Semester** 

Pathogenic Bacteriology Urinalysis and Body Fluids Genetics Clinical Parasitology General Education courses (2)

**Summer Session** 

Immunohematology Clinical Lab Science Capstone

#### **FOURTH YEAR**

Clinical Chemistry Clinical Hematology and Hemostasis Clinical Immunohematology Clinical Immunology Diagnostic Microbiology Laboratory Management and Education





#### AFFILIATED HOSPITAL CLINICAL SITES

- · Affinity Health System/St. Elizabeth Hospital Laboratories; Appleton, Wis.
- St. Joseph Hospital/ Marshfield Laboratories; Marshfield, Wis.
- Aspirus Wausau Hospital Laboratories; Wausau, Wis.
- Hennepin County Medical Center Laboratories; Minneapolis, Minn.
- Mayo Medical Center; Rochester, Minn.
- University of North Dakota (University affiliation); Grand Forks, N.D.