

# Clinical Laboratory Science

A degree in Clinical Laboratory Science prepares students to work in a variety of clinical, research, industrial, and forensic laboratories. The Clinical Laboratory Science major will allow students to become certified to perform patient testing. Once admitted to the CLS program, students will declare a specific laboratory concentration in which to train.

Each concentration prepares students in specialized laboratory techniques. NMU clinical laboratory science students are well trained for careers in the health care industry. There is a high demand for individuals trained in these fields. The School of Clinical Sciences has an excellent pass rate for national certification exams. Nearly all of our graduates find jobs in their field within six months of graduation.

See a Clinical Sciences Advisor to help guide you into the laboratory science program that most interests you. See the list of possible certifications that can be earned in our programs.

## Skills and Competencies

A clinical laboratory scientist has to be meticulous and able to concentrate for long periods of time. Good vision and manual dexterity are also required. One must be able to collect and prepare all types of patient specimens for examination.

A clinical laboratory scientist examines and analyzes blood and other body fluids. They test for bacteria, parasites, match blood for transfusions, measure drug levels, examine blood cells and analyze hundreds of proteins and hormones in patient samples. CLS professionals use microscopes, cell counters, chemistry analyzers, and molecular diagnostic equipment.

## Course Work

This degree includes the following core courses for the major and additional courses dependent on the concentration selected as well as general education courses.

### Clinical Laboratory Core

- CLS100 Obtaining a Blood Specimen (1 cr.)
- CLS109 Introduction to Diagnostic Sciences (1 cr.)
- CLS190 Microscopy and Lab Techniques (1 cr.)
- CLS200 Urine and Blood Fluid Analysis (1 cr.)
- CLS201 Clinical Hematology/Coagulation (3 cr.)
- CLS203 Immunohematology (3 cr.)
- CLS204 Clinical Microbiology (2 cr.)
- CLS213 Clinical Immunology and Serology (1 cr.)
- CLS313 Introduction to Clinical Research (1 cr.)
- CLS410 Introduction to Clinical Management (1 cr.)
- CLS420 Clinical Educational Practices (1 cr.)
- BI 104 Human Anatomy & Physiology (4 cr.) or BI 207 Human Anatomy and Physiology 1 (4 cr.)
- BI 111 Introductory Biology: Principles (4 cr.)
- CH111 General Chemistry I (5 cr.)
- CH112 General Chemistry II (5 cr.)
- MA109 Introduction to Probability & Statistics (4 cr.)

### Clinical Laboratory Concentration

- Anatomic Pathology
- Clinical Systems Analyst
- Diagnostic Genetics
- Laboratory Medicine
- Microbiology
- Science Technologist

Detailed course descriptions can be found at [www.nmu.edu/bulletin](http://www.nmu.edu/bulletin).

## Career Development

You should begin the resume-building process as soon as you can. The Academic and Career Advisement Center can assist you with career planning, while Career Services will help you fine tune your resume and look for jobs related to your field. In the meantime, the more hands-on experience you have, the better the chances are that you will find a job. Becoming involved in a professional related internship is a way to develop your professional skills and gain experience. Your academic course work is important as well, so be sure to maintain a high grade point average.

## Additional Considerations

Graduates are eligible for several national certifications upon completion of this program.

- They include:
- Medical Laboratory Scientist (MLS)
  - Microbiology (M)
  - Molecular Biology (MB)
  - Cytogenetics (CG)
  - Histotechnologist (HTL)

## Job Outlook

Starting salaries are contingent upon geographic location and the individual applicant's work experience and initiative. The median salary is \$61,070 in 2016. Clinical Laboratory Scientists are considered to have a faster than average job potential with a possible growth of 13% through 2026. New advances in laboratory and genetic testing will increase demand for CLS professionals. The medical laboratory science profession was rated the second most meaningful career by the U.S. Education Advisory Board.

# Potential Careers

NMU's Clinical Laboratory Science Program prepares students for employment in the following careers:

Biotechnology  
Clinical Chemist  
Crime Lab Analyst  
Cytotechnologist  
Forensic Scientist  
Hematologist  
Histotechnologist  
Infection control Supervisor  
Lab Sales Representative  
Laboratory Administrator  
Laboratory Science Professor  
Marketing Representative  
Medical Laboratory Scientist  
Microbiologist  
Molecular Biology/Cytogenetic Technologist  
Phlebotomist  
Quality Control Technician  
Research and Development  
State Health Departments  
Toxicologist

# Additional Resources and Information

For Career Planning and Opportunities:  
Academic & Career Advisement Center  
3302 C.B. Hedgcock  
906-227-2971  
[www.nmu.edu/acac](http://www.nmu.edu/acac)

School of Clinical Sciences  
3515 West Science  
906-227-2885  
[www.nmu.edu/clinicalsciences](http://www.nmu.edu/clinicalsciences)

For Job Search, Resume and Career Information:  
Career Services  
3502 C.B. Hedgcock  
906-227-2800  
[www.nmu.edu/careers](http://www.nmu.edu/careers)

For Information about NMU Student Organizations Associated with this Major Contact:  
Center for Student Enrichment  
1206 University Center  
906-227-2439  
[www.nmu.edu/cse](http://www.nmu.edu/cse)

Clinical Lab Science Club  
906-227-2885

Internet Resource Links:  
[www.careers.org](http://www.careers.org)  
[www.bls.gov](http://www.bls.gov)

For Career Information with National Organizations:  
[www.ascls.org](http://www.ascls.org) -American Society for Clinical Laboratory Science  
[www.ascp.org](http://www.ascp.org) -American Society for Clinical Pathology  
[www.naacls.com](http://www.naacls.com) -National Accrediting Agency for Clinical Laboratory Sciences



**NORTHERN MICHIGAN  
UNIVERSITY**

MARQUETTE, MICHIGAN

The Academic & Career Advisement Center  
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What to do with  
a major in...

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