

Madonna University

Clinical Laboratory Sciences

Medical Technology/Cytotechnology/Histotechnology

College of Science and Mathematics

About the Program

Overview

Medical Technologists perform diagnostic medical procedures and function in laboratory medicine as supervisors, educators, managers, or researchers.

The Medical Technology major prepares students to intern in histotechnology. The Clinical Laboratory Sciences/ Medical Technology program is designed to prepare the candidate to apply for the internship accredited by any of the four national certification boards. The student must maintain a grade point average of 3.0 or better to be considered for the internship. Madonna University participates in the Medical Technology matching Program of Michigan (MTIMPM).

Program Specifics

There are two levels of preparation in Medical Technology education:

- **Bachelor of Science (B.S.) in Medical Technology (3 + 1):** three years on campus plus a 1-year full-time internship.
- **Bachelor of Science (B.S.) with a major in Biology with Clinical Laboratory Sciences Track (4 + 1):** four years on campus plus a full-time internship following graduation.

Clinical internships are competitive, unpaid, and not guaranteed.

Clinical Laboratory Sciences / Medical Technology Major (3+1): Bachelor of Science (32-56 s.h.)

REQUIRED MAJOR COURSES:

| | | |
|-----------|---|-------------------|
| AHA 1010 | Medical Terminology | 2 s.h. |
| AHA 4900 | Fundamentals of Health Care Research | 2 s.h. |
| MTE 2010 | Introduction to Health Care Professions | 2 s.h. |
| MTE 3050 | Clinical Hematology | 4 s.h. |
| MTE 3070 | Immunohematology and Serology | 4 s.h. |
| MTE 3090 | Hemostasis and Special Procedures | 4 s.h. |
| MTE 3630 | Clinical Chemistry I | 3 s.h. |
| MTE 3650 | Clinical Chemistry II | 3 s.h. |
| *MTE 4510 | Clinical Internship I | 2-10 s.h. |
| *MTE 4520 | Clinical Internship II | 2-10 s.h. |
| *MTE 4530 | Clinical Internship III | 2-10 s.h. |
| MTE 4950 | Senior Seminar | 2 s.h. |
| | | 32-56 s.h. |

REQUIRED SUPPORT COURSES:

| | | |
|----------|----------------------------|----------------|
| BIO 2260 | Microbiology | 4 s.h. |
| BIO 2430 | Anatomy and Physiology I | 3 s.h. |
| BIO 2440 | Anatomy and Physiology II | 3 s.h. |
| BIO 3280 | Immunology | 4 s.h. |
| BIO 4270 | Clinical Bacteriology | 4 s.h. |
| CHM 1110 | General Chemistry I | 4 s.h. |
| CHM 1120 | General Chemistry II | 4 s.h. |
| CHM 2210 | Organic Chemistry I | 4 s.h. |
| CHM 3610 | Biochemistry I | 4 s.h. |
| MTH 1050 | Intermediate Algebra | 4 s.h. |
| MTH 2350 | Probability and Statistics | 4 s.h. |
| | | 42 s.h. |

RECOMMENDED ELECTIVES:

| | | |
|----------|----------------------|-----------|
| BIO 3010 | Genetics | 4 s.h. |
| BIO 3170 | Invertebrate Zoology | OR |
| BIO 3500 | Medical Mycology | OR |
| BIO 4140 | Molecular Biology | 3-4 s.h. |
| | | 7-8 s.h. |

Biology Major with Clinical Laboratory Sciences track (4+1): Bachelor of Science (43 s.h.)

REQUIRED MAJOR COURSES:

| | | |
|----------|-------------------------------------|----------------|
| BIO 1030 | General Biology I | 4 s.h. |
| BIO 1040 | General Biology II | 4 s.h. |
| BIO 2260 | Microbiology | 4 s.h. |
| BIO 2430 | Anatomy and Physiology I | 3 s.h. |
| BIO 2440 | Anatomy and Physiology II | 3 s.h. |
| BIO 3010 | Genetics | 4 s.h. |
| BIO 3170 | Invertebrate Zoology (Parasitology) | 4 s.h. |
| BIO 3280 | Immunology | 4 s.h. |
| BIO 3500 | Medical Mycology | 4 s.h. |
| BIO 4270 | Clinical Bacteriology | 4 s.h. |
| BIO 4410 | Molecular Biology | 3 s.h. |
| BIO 4950 | Senior Seminar | 2 s.h. |
| | | 43 s.h. |

REQUIRED MTE SUPPORT COURSES:

| | | |
|----------|---|----------------|
| AHA 1010 | Medical Terminology | 2 s.h. |
| MTE 2010 | Introduction to Health Care Professions | 2 s.h. |
| MTE 3050 | Clinical Hematology | 4 s.h. |
| MTE 3070 | Immunohematology and Serology | 4 s.h. |
| MTE 3090 | Hemostasis and Special Procedures | 4 s.h. |
| MTE 3630 | Clinical Chemistry I | 3 s.h. |
| MTE 3650 | Clinical Chemistry II | 3 s.h. |
| | | 22 s.h. |

REQUIRED SUPPORT COURSES:

| | | |
|----------|----------------------------|----------------|
| CHM 1110 | General Chemistry I | 4 s.h. |
| CHM 1120 | General Chemistry II | 4 s.h. |
| CHM 2210 | Organic Chemistry I | 4 s.h. |
| CHM 3610 | Biochemistry I | 4 s.h. |
| MTH 1210 | Precalculus | 5 s.h. |
| MTH 2350 | Probability and Statistics | 4 s.h. |
| PHY 2530 | General Physics I | 4 s.h. |
| PHY 2540 | General Physics II | 4 s.h. |
| | | 33 s.h. |

See back for: Post-Bachelor Certificate of Completion



For Admissions Information

Application and any transcripts are to be submitted directly to:

Office of Undergraduate
Admissions

Madonna University
36600 Schoolcraft Road
Livonia, Michigan 48150-1176
(734) 432-5339
(800) 852-4951, ext. 5339
FAX: (734) 432-5424

Web: www.madonna.edu

E-mail: admissions@madonna.edu

For Program Information

Dr. Mary Hunt, Director
Health Sciences, Health Services
Madonna University
36600 Schoolcraft Road
Livonia, Michigan 48150-1176

(734) 432-5511
(800) 852-4951, ext. 5511
FAX: (734) 432-5393

Web: www.madonna.edu

E-mail: mhunt@madonna.edu

Madonna University reserves the right to withdraw or modify information in this brochure.

See Advisor/Admissions Office for current information.

Madonna University guarantees the right to equal educational opportunity without discrimination because of race, religion, sex, national origin, age, or disabilities.

Clinical Laboratory Sciences / Medical Technology Post-Bachelor Certificate of Completion

Applicants for the post-bachelor certificate must provide transcript evidence of completion of Biology, Chemistry, and Mathematics courses required by the appropriate credentialing agency.

International applicants must provide an evaluation of foreign educational credentials (WES recommended) prior to enrollment in the program. Applications for this service are available on the web at www.wes.org or from the Health Sciences office.

REQUIRED CERTIFICATE COURSES:

| | |
|--|----------------|
| AHA 1010 Medical Terminology | 2 s.h. |
| MTE 3050 Clinical Hematology | 4 s.h. |
| MTE 3070 Immunohematology and Serology | 4 s.h. |
| MTE 3090 Hemostasis and Special Procedures | 4 s.h. |
| MTE 3630 Clinical Chemistry I | 3 s.h. |
| MTE 3650 Clinical Chemistry II | 3 s.h. |
| | 20 s.h. |

NAACLS-accredited Medical Technology (CLS) internships are fulltime.

NCA-eligible Medical Technology (CLS) internship may be full-time or part-time. Graduates are eligible to write the CLS or HTL examination upon successful completion of the internship.

*Students in the MTE 4510, 4520, 4530 internship sequence, which is in a NAACLS-accredited internship approved by the MTIMPM, register for a minimum of 2 s.h. of credit each semester they are in the internship.

Students who choose to substitute the NCA-eligible internship substitute the following courses for MTE 4510, 4520, 4530:

| | |
|---------------------------------|--------|
| MTE 3930 Clinical Internship I | 4 s.h. |
| MTE 3930 Clinical Internship II | 4 s.h. |

Career Options

Medical Technologists perform diagnostic medical procedures and function in laboratory medicine as supervisors, educators, managers, or researchers.

Practice Settings

- Hospitals and Clinics
- Private Laboratories
- Research Laboratories
- Medical Research
- Pharmaceutical and other Industries
- Public Health Laboratories
- Health Maintenance Organizations
- Federal, State, and Municipal Health Organizations

Please Note:

Science and mathematics courses taken more than seven years previously may need to be repeated, at the discretion of the program director. *(This policy is general across all College of Science and Mathematics programs.)*