Bachelor of Science in Medical Laboratory Science

Medical Laboratory Science (BSMLS)

Bachelor of Science in Medical Laboratory Science

http://www.odu.edu/mdts/medical-laboratory-science

Program Director:
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The medical laboratory scientist/medical technologist plays a vital role in the diagnosis and treatment of disease by performing clinical laboratory tests on patients' blood, body fluids, and other specimens. This includes clinical tests within the areas of chemistry, microbiology, hematology, immunology/serology, urinalysis, immunohematology (blood banking), and molecular pathology.

The program has been continually accredited by the National Accrediting Agency for Clinical Laboratory Sciences, 5600 N River Road, Suite 720, Rosemont, IL 60018, 773 714-8880. Due to accreditation, the program graduates are eligible to take the national certification exam for Medical Laboratory Scientist, administered by the American Society for Clinical Pathology, MLS(ASCP).

Admission

Admission to the University does not constitute admission to the medical laboratory science program. Students are admitted to the program after completion of two years of college study, which includes all program prerequisite courses. All program prerequisite courses must be completed with a grade of C (2.00) or better. Additionally, applicants must be in good academic standing (cumulative GPA 2.0 or greater). The students then enter a program of clinical laboratory test courses and may be in the major.

The medical laboratory scientist/medical technologist plays a vital role in the diagnosis and treatment of disease by performing clinical laboratory tests on patients' blood, body fluids, and other specimens. This includes clinical tests within the areas of chemistry, microbiology, hematology, immunology/serology, urinalysis, immunohematology (blood banking), and molecular pathology.

Admission

Requirements for Graduation include the following:

- Minimum of 120 credit hours.
- Minimum of 30 credit hours overall and 12 credit hours of upper-level courses in the major program from Old Dominion University.
- Minimum overall cumulative grade point average of C (2.00) in all courses taken.
- Minimum overall cumulative grade point average of C (2.00) in all courses taken toward the major.
- Minimum overall cumulative grade point average of C (2.00) in all courses taken toward a minor.
- Completion of ENGL 110C, ENGL 211C or ENGL 231C, and the writing intensive (W) course in the major with a grade of C or better. The W course must be taken at Old Dominion University.
- Completion of Senior Assessment.

Requirements for Graduation

Requirements for graduation include the following:

- Minimum of 120 credit hours.
- Minimum of 30 credit hours overall and 12 credit hours of upper-level courses in the major program from Old Dominion University.
- Minimum overall cumulative grade point average of C (2.00) in all courses taken.
- Minimum overall cumulative grade point average of C (2.00) in all courses taken toward the major.
- Minimum overall cumulative grade point average of C (2.00) in all courses taken toward a minor.
- Completion of ENGL 110C, ENGL 211C or ENGL 231C, and the writing intensive (W) course in the major with a grade of C or better. The W course must be taken at Old Dominion University.
- Completion of Senior Assessment.

Departmental Requirements

BIOI 250 & BIOI 251 Human Anatomy and Physiology I 8
CHEM 211 & CHEM 212 Organic Chemistry I Lecture and Organic Chemistry I Laboratory 5

Total Credit Hours 13

Students must complete the following courses with a C or better prior to entering the Medical Laboratory Science/Medical Technology program: BIOI 121N and BIOI 122N, BIOI 250 and BIOI 251, CHEM 121N and
Medical Laboratory Science Major

General Education
Complete lower-division requirements 45-51
Complete upper-division requirements 0-6

Departmental Requirements
Complete departmental requirements 13

Medical Laboratory Science
See requirements below 63

Total Credit Hours 121-133

Course | Title | Credit Hours
--- | --- | ---
Third Year
Fall
MLS 210 | Orientation to Medical Laboratory Science | 1
MLS 307 | Clinical Methods in Microbiology | 1
MLS 308 | Clinical Microbiology | 2
MLS 311 | Hematology | 3
MLS 312 | Hematology Laboratory | 1
MLS 324 | Clinical Instrumentation | 3
MLS 325 | Clinical Instrumentation Methods | 1
MLS 330 | Clinical Immunology/Serology | 2
MLS 331 | Clinical Immunology/Serology Laboratory | 1
MDTS 401 | Molecular Diagnostics Laboratory | 3

Credit Hours 18

Spring
MLS 309 | Medical Bacteriology | 3
MLS 310 | Urinalysis and Body Fluids | 1
MLS 313 | Diagnostic Methods in Urinalysis | 1
MLS 319 | Medical Bacteriology Methods | 2
MLS 326 | Immunohematology | 3
MLS 336 | Immunohematology Laboratory | 1
MLS 328 | Advanced Hematology and Hemostasis | 2
MLS 339 | Medical Parasitology and Mycology Laboratory | 1
MLS 340 | Medical Parasitology, Mycology, and Virology | 1
MLS 351 | Clinical Biochemistry | 3

Credit Hours 18

Fourth Year
Fall
MLS 403W | Management in the Clinical Setting | 3
MLS 440 | Statistical Applications and Data Analysis in the Clinical Laboratory | 3

4-10 credits from fourth year second term courses

Credit Hours 6

Spring
MLS 404 | Clinical Hematology Practicum | 4
MLS 452 | Clinical Biochemistry Practicum | 5
MLS 457 | Medical Laboratory Science Seminar | 1

Credit Hours 10

Total Credit Hours 63

Note: Junior year core courses that are over three years old prior to starting a rotation (practicum course) must be reevaluated by the faculty member at ODU in charge of the specialty, in both theoretical knowledge and technical skills. Reevaluation may result in the need to repeat and/or audit out-of-date courses. This applies to both part-time and returning students.

Degree Program Guide

The Degree Program Guide is a suggested curriculum to complete this degree program in four years. It is just one of several plans that will work and is presented only as broad guidance to students. Each student is strongly encouraged to develop a customized plan in consultation with their academic advisor. Additional information can also be found in Degree Works.

Course | Title | Credit Hours
--- | --- | ---
Freshman
Fall
ENGL 110C | English Composition | 3
MATH 102M or MATH 103M | College Algebra or College Algebra with Supplemental Instruction | 3
BIOL 121N | General Biology I | 3
BIOL 122N | General Biology I Lab | 1
Human Creativity | | 3
CHEM 103 may be needed as prerequisite to CHEM 121N (3 credits)

Credit Hours 13

Spring
ENGL 211C or ENGL 231C | Writing, Rhetoric, and Research or Writing, Rhetoric, and Research: Special Topics | 3
CHEM 121N | Foundations of Chemistry I Lecture | 3

Credit Hours 16

Summer
MLS 320 | Blood Collection Techniques | 2
MLS 406 | Clinical Microbiology Practicum | 5
MLS 454 | Clinical Blood Bank Practicum | 4

Clinical Practica 4 to 5 credits from fourth year second term courses

Credit Hours 11
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<th>Term</th>
<th>Course</th>
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