Bachelor of Science in Medical Laboratory Science

Medical Laboratory Science with a Major in Cytology (BSMLS)

https://www.odu.edu/medical-diagnostic-translational-sciences/cytology

Deborah Krzyzaniak, M.S., C.T.(ASCP), S.C.T.(ASCP) Program Director

The program of study is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 9355 113th Street, N.W. Seminole, FL. 33775; phone: 727-210-2350; e-mail: mail@caahep.org; website: www.caahep.org (http://www.caahep.org), in association with the American Society of Cytopathology (ASC).

Theory is reinforced through an integrated clinical phase that allows the student direct experience in a hospital or lab setting providing additional training in screening techniques and diagnostic procedures. Students are required to obtain a minimum grade of 70 percent or C in all didactic coursework. Clinical coursework requires a minimum passing grade of 80, 85 and 90 percent during the first, second and third internship, respectively. Graduates are eligible to sit for the national board exam given by the ASCP (American Society of Clinical Pathology) upon successful completion of the program.

Application to the cytology program must be submitted by May 1. Competitive applicants should have an overall GPA of 2.8 or higher.

Requirements

Lower-Division General Education

Written Communication

Oral Communication

Mathematics

Language and Culture

Information Literacy and Research

Human Behavior

Human Creativity

Interpreting the Past

Upper-Division General Education

• Option A. Approved Disciplinary Minor, 12 hours minimum; also second degree or second major.
• Option B. Interdisciplinary Minor (specifically 12 hours, 3 of which may be in the major)
• Option C. An approved Certification Program such as teaching licensure
• Option D. Two Upper-Division Courses from outside the College of Health Sciences and not required by the major (6 hours)

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

BIOL 121N General Biology I 3
BIOL 122N General Biology I Lab 1
BIOL 123N General Biology II 3
BIOL 124N General Biology II Lab 1
CHEM 105N or CHEM 121N Introductory Chemistry 3
or CHEM 112N Foundations of Chemistry I Lecture
CHEM 106N Introductory Chemistry Laboratory 1
or CHEM 122N Foundations of Chemistry I Laboratory
CHEM 107N or CHEM 123N Introductory Organic and Biochemistry 3
or CHEM 124N Foundations of Chemistry II Lecture
CHEM 108N Introductory Organic and Biochemistry Laboratory 1
or CHEM 125N Foundations of Chemistry II Laboratory
BIOL 240 or BIOL 250 Fundamentals of Anatomy and Physiology I 4
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.

Cytology Major

General Education
Complete lower-division requirements 30-36
Complete upper-division requirements 0-6

Departmental Requirements
Complete departmental requirements 28

First Semester
CYTO 404 General Pathology 3
CYTO 407 Clinical Histology (Strongly Recommended) 3
MDTS 401 Molecular Diagnostics Laboratory 3
MLS 403W Management in the Clinical Setting 3
MLS 310 Urinalysis and Body Fluids (may be taken earlier-see Degree Program Guide) 1

Second Semester
CYTO 403 Gynecological Screening Laboratory 3
CYTO 405 Normal Gynecological Cytology 3
CYTO 415 Abnormal Gynecological Cytology 4
CYTO 430 Cytopreparation & Ancillary Techniques 4
CYTO 444 Genitourinary Cytology 2
CYTO 445 Breast Cytology 2

Third Semester
CYTO 424 Respiratory Cytology 4
CYTO 446 Body Fluids Cytology 3
CYTO 448 Non-Epithelial Cytology 1
CYTO 448 Cytopreparation I 4
CYTO 442 Gastro-Intestinal Cytology 2
CYTO 458 Cytopreparation I 3

Fourth Semester
CYTO 456 Fine Needle Aspiration Cytology I 3
CYTO 457 Fine Needle Aspiration Cytology II 3
CYTO 478 Cytopreparation III 8
CYTO 497 Cytopreparation Senior Seminar 1
CYTO 499 Comprehensive Cytology Review 1

Total Credit Hours 122-134

* C or better required to meet the University Writing Requirement.

Certificate Option/Second Degree

A certificate in cytology or second degree in Medical Laboratory Sciences (BSMLS) is available to students who have a Bachelor's degree, with a minimum of 20 credit hours in biology and eight credit hours in chemistry. The certificate in cytology requires 61-64 credit hours and a minimum 2.8 GPA. Courses included in the certificate mirror the cytology major requirements.

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
ENGL 100C | English Composition (C or BIOL 241 or BIOL 251, CHEM 106N or CHEM 121N/BIOL 122N, BIOL 122N/BIOL 124N, BIOL 240 or BIOL 250, CHEM 121N/BIOL 122N, BIOL 122N/BIOL 124N, and BIOL 150/BIO 151. | 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
CHEM 105N or CHEM 121N | Introductory Chemistry or Foundations of Chemistry I Lecture | 3
CHEM 106N or CHEM 122N | Introductory Chemistry Laboratory or Foundations of Chemistry I Laboratory | 1

Fall

Credit Hours 14

Spring

Credit Hours 14

Sophomore

Fall

Credit Hours 14

Human Creativity 3

Spring

Credit Hours 14

Medical Laboratory Science with a Major in Cytology (BSMLS) 2
### Junior

#### Fall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CYTO 404</td>
<td>General Pathology</td>
<td>3</td>
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<tr>
<td>CYTO 407</td>
<td>Clinical Histology</td>
<td>3</td>
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<tr>
<td>MDT 401</td>
<td>Molecular Diagnostics Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>MLS 403W</td>
<td>Management in the Clinical Setting (C or better required)</td>
<td>3</td>
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<tr>
<td></td>
<td>Impact of Technology (HIST 304T preferred for Option D)</td>
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**Credit Hours:** 15

#### Spring

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<tr>
<td>CYTO 403</td>
<td>Gynecological Screening Laboratory</td>
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<tr>
<td>CYTO 405</td>
<td>Normal Gynecological Cytology</td>
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<td>CYTO 415</td>
<td>Abnormal Gynecological Cytology</td>
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<td>CYTO 430</td>
<td>Cytopreparation &amp; Ancillary Techniques</td>
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<td>CYTO 444</td>
<td>Genitourinary Cytology</td>
<td>2</td>
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<tr>
<td>CYTO 445</td>
<td>Breast Cytology</td>
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**Credit Hours:** 18

#### Summer

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<tr>
<td>CYTO 424</td>
<td>Respiratory Cytology</td>
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<tr>
<td>CYTO 446</td>
<td>Body Fluids Cytology</td>
<td>3</td>
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<td>CYTO 448</td>
<td>Non-Epithelial Cytology</td>
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</tr>
<tr>
<td>CYTO 468</td>
<td>Cytology Internship II</td>
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<td>CYTO 442</td>
<td>Gastro-Intestinal Cytology</td>
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<td>CYTO 458</td>
<td>Cytology Internship I</td>
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**Credit Hours:** 17

### Senior

#### Fall

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<tr>
<td>CYTO 456</td>
<td>Fine Needle Aspiration Cytology I</td>
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<tr>
<td>CYTO 457</td>
<td>Fine Needle Aspiration Cytology II</td>
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<td>CYTO 478</td>
<td>Cytology Internship III</td>
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<td>CYTO 497</td>
<td>Cytology Senior Seminar</td>
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<td>CYTO 499</td>
<td>Comprehensive Cytology Review</td>
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**Credit Hours:** 16

**Total Credit Hours:** 122