

Bachelor of Science in Health Sciences Health Sciences with a Major in Cytotechnology (BSHS)

<http://www.odu.edu/mdts/cytotechnology> (<http://www.odu.edu/mdts/cytotechnology/>)

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*New majors will not be accepted for the Bachelor of Science in Health Sciences with a major in cytotechnology for the 2023-24 academic year.

The School of Medical Diagnostic and Translational Sciences offers a major in cytotechnology through the Bachelor of Science in Health Sciences. The program offers a first and second degree option as well as a post-baccalaureate certificate option.

Cytotechnologists are specially trained medical laboratory professionals who work with pathologists in detecting changes in cell samples from numerous body sites which allows the early diagnosis of cancer. This is done primarily with the use of the microscope to evaluate slide preparation of cell samples for abnormalities in structure, indicating cancer, precancerous lesions, benign tumors, infectious agents and inflammatory processes. They are also trained in specimen preparation, molecular, FISH, flow cytometry techniques, and fine needle aspiration cytology.

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.

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 cytotechnology program must be submitted by March 15 for the fall semester. Competitive applicants should have an overall GPA of 2.8 or higher.

Requirements

Lower-Division General Education

Written Communication (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#written)	6
Oral Communication (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#oral)	3
Mathematics (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#math)	3
Language and Culture (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#language)	0-6
Information Literacy and Research (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#information)	3
Human Behavior (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#behavior)	3
Human Creativity (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#creativity)	3
Interpreting the Past (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#interpret)	3

Literature (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#literature)	3
Philosophy and Ethics (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#philosophy)	3
The Nature of Science (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#nature)	8
Impact of Technology (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#impact)	3

Oral Communication: Met in the major with CYTO 424 and CYTO 497.

Mathematics: MATH 102M or MATH 103M

Information Literacy and Research: HLTH 120G preferred

Nature of Science: BIOL 121N & BIOL 122N, BIOL 123N & BIOL 124N, CHEM 105N & CHEM 106N, CHEM 107N & CHEM 108N

Philosophy and Ethics: PHIL 345E recommended; 300/400 level P or E course meets upper division general education/Option D

Impact of Technology: HIST 304T preferred but any 300/400 level T course EXCEPT DNTH 440T meets upper-division general education/Option D

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 240 or BIOL 250	Fundamentals of Anatomy and Physiology I Human Anatomy and Physiology I	4
BIOL 241 or BIOL 251	Fundamentals of Anatomy and Physiology II Human Anatomy and Physiology II	4
BIOL 150	Introductory Microbiology	3
BIOL 151	Introductory Microbiology Laboratory	1
Total Credit Hours		12

Students must complete the following courses prior to entering the cytotechnology program: BIOL 121N and BIOL 122N, BIOL 123N and BIOL 124N, BIOL 240 or BIOL 250 and BIOL 241 or BIOL 251, CHEM 105N and CHEM 106N, and CHEM 107N and CHEM 108N.

Cytotechnology Major

General Education

Complete lower-division requirements	46-52
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Complete upper-division requirements	0-6
Departmental Requirements	
Complete departmental requirements	12
First Semester	
CYTO 404 General Pathology	3
CYTO 407 Clinical Histology (Strongly Recommended)	3
CYTO 428W Cytopreparatory Techniques and Procedures	3
MDTS 401 Molecular Diagnostics Laboratory	3
Second Semester	
CYTO 403 Gynecological Screening Laboratory	3
CYTO 405 Normal Gynecological Cytology	3
CYTO 415 Abnormal Gynecological Cytology	4
CYTO 430 Cytology Laboratory Operations & Ancillary Techniques	3
CYTO 442 Gastro-Intestinal Cytology	2
CYTO 458 Cytology Internship I	3
Third Semester	
CYTO 424 Respiratory Cytology	4
CYTO 444 Genitourinary Cytology	2
CYTO 445 Breast Cytology	2
CYTO 446 Body Fluids Cytology	3
CYTO 448 Non-Epithelial Cytology	1
CYTO 468 Cytology Internship II	4
Fourth Semester	
CYTO 456 Fine Needle Aspiration Cytology I	3
CYTO 457 Fine Needle Aspiration Cytology II	3
CYTO 478 Cytology Internship III	8
CYTO 497 Cytology Senior Seminar	1
CYTO 499 Comprehensive Cytology Review	1
Total Credit Hours	120-132

Certificate Option/Second Degree

A certificate in cytotechnology or second degree in health sciences is available to students who have a Bachelor of Science degree, with a minimum of 20 credit hours in biology and eight credit hours in chemistry. The certificate in cytotechnology requires 62 credit hours and a minimum 2.8 GPA. Courses included in the certificate mirror the cytotechnology 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		
Fall		
ENGL 110C	English Composition	3
CHEM 105N	Introductory Chemistry	3
CHEM 106N	Introductory Chemistry Laboratory	1
BIOL 121N	General Biology I	3
BIOL 122N	General Biology I Lab	1
MATH 102M or MATH 103M	College Algebra or College Algebra with Supplemental Instruction	3
Credit Hours		14

Spring		
ENGL 211C or ENGL 231C	Writing, Rhetoric, and Research or Writing, Rhetoric, and Research: Special Topics	3
CHEM 107N	Introductory Organic and Biochemistry	3
CHEM 108N	Introductory Organic and Biochemistry Laboratory	1
BIOL 123N	General Biology II	3
BIOL 124N	General Biology II Lab	1
Information Literacy		3
Credit Hours		14

Sophomore

Fall		
BIOL 240 or BIOL 250	Fundamentals of Anatomy and Physiology I or Human Anatomy and Physiology I	4
Literature		3
BIOL 150	Introductory Microbiology	3
BIOL 151	Introductory Microbiology Laboratory	1
Human Behavior		3
Human Creativity		3
Credit Hours		17

Spring

BIOL 241 or BIOL 251	Fundamentals of Anatomy and Physiology II or Human Anatomy and Physiology II	4
Interpreting the Past		3
Impact of Technology (Option D 300/400)		3
Philosophy and Ethics (Option D 300/400)		3
Credit Hours		13

Junior

Fall		
CYTO 404	General Pathology	3
CYTO 407	Clinical Histology	3
CYTO 428W	Cytopreparatory Techniques and Procedures	3
MDTS 401	Molecular Diagnostics Laboratory	3
Credit Hours		12

Spring

CYTO 403	Gynecological Screening Laboratory	3
CYTO 405	Normal Gynecological Cytology	3
CYTO 415	Abnormal Gynecological Cytology	4
CYTO 430	Cytology Laboratory Operations & Ancillary Techniques	3
CYTO 442	Gastro-Intestinal Cytology	2
CYTO 458	Cytology Internship I	3
Credit Hours		18

Summer

CYTO 424	Respiratory Cytology	4
CYTO 444	Genitourinary Cytology	2
CYTO 445	Breast Cytology	2
CYTO 446	Body Fluids Cytology	3
CYTO 448	Non-Epithelial Cytology	1
CYTO 468	Cytology Internship II	4
Credit Hours		16

Senior**Fall**

CYTO 456	Fine Needle Aspiration Cytology I	3
CYTO 457	Fine Needle Aspiration Cytology II	3
CYTO 478	Cytology Internship III	8
CYTO 497	Cytology Senior Seminar	1
CYTO 499	Comprehensive Cytology Review	1
Credit Hours		16
Total Credit Hours		120