

Bachelor of Science in Health Sciences

Health Sciences with a Major in Pre-Clinical Studies (BSHS)

The Pre-Clinical Studies major provides clear paths for students interested in graduate health professions with flexibility to select courses, depending on the anticipated graduate degree. The program is designed to provide students with a strong foundation in health and science coursework to prepare students for pursuing graduate health professions degrees.

- The Pre-Clinical Studies major requires a core set of coursework, including topics such as the US healthcare system, health informatics, health equity, and health sciences research. In addition to the core, students will choose 30 credits in science coursework from options including biology, chemistry, exercise kinesiology and physiology, medical laboratory science, molecular diagnostics, nutrition, physics, and psychology.
- This diverse set of health and science-based coursework allows students to pursue a wide variety of health-related interests while completing requirements needed to apply to professional health graduate programs in medicine, research, and diagnostic professions.

Students are encouraged to engage in volunteer and shadowing experiences early in their academic career to solidify their plans to pursue a healthcare career. Such experiences help students begin to refine their career goals and develop a practical understanding of the healthcare field. These early exposures lay a strong foundation for the internship required in the senior year of the program and help students begin to develop competitive applications to graduate-level professional health programs.

Major Declaration

To officially declare a major in Pre-Clinical Studies, students must complete the following courses with a grade of C or better: HLTH 120G, ENGL 110C, MATH 102M or MATH 103M or MATH 162M, CHEM 121N, CHEM 122N, CHEM 123N, CHEM 124N STAT 130M, and BIOL 250.

Additionally, a cumulative grade point average of 2.7 or better is required to declare the major. Students who have met all major declaration requirements will be referred by their advisor in the Virginia Health Sciences Advising Center to the program director for major declaration and assignment to a program advisor. For additional information on the curriculum or major declaration requirements, please contact the Virginia Health Sciences Advising Center (vhsadvising@odu.edu).

Continuance and Readmission Policy

In addition to the Old Dominion University continuance policies in this catalog, the following policies are specific to all declared majors in the Pre-Clinical Studies Program:

1. A grade of C (2.00) or better is required in all required core courses and Pre-Clinical Studies major electives to continue in the program.
2. A student who earns a grade of C- or lower will not be considered in good academic standing in the major and must retake the course in the next semester the course is offered.
3. A Pre-Clinical Studies major student who does not earn a grade of C or higher in multiple major courses may be undeclared and must meet with the program director to create an academic success plan that outlines requirements for continuance in the major. Students who continue not to meet continuance requirements for more than one semester may be removed from the major and referred to the Academic Success Center for advising and degree counseling.
4. A cumulative grade point average of 2.7 or better is required to continue in the Pre-Clinical Studies program.

5. A student may be readmitted to the Pre-Clinical Studies major only once.

Lower-Division General Education

Written Communication (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#written)	6
Oral Communication (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#oral)	3
Mathematics (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#math)	3
Language and Culture (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#language)	0-6
Information Literacy and Research (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#information)	3
Human Behavior (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#behavior)	3
Human Creativity (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#creativity)	3
Interpreting the Past (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#interpret)	3
Literature (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#literature)	3
Philosophy and Ethics (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#philosophy)	3
The Nature of Science (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#nature)	8
Impact of Technology (https://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#impact)	3

Written Communication: grade of C or better required in both courses

Oral Communication: Can be met in the major with HMSV 339

Mathematics: MATH 102M or MATH 103M or MATH 162M required (C or better required)

Information Literacy and Research: Met in the major prerequisite with HLTH 120G

Human Behavior: PSYC 201S or SOC 201S required (C or better required)

Philosophy and Ethics: PHIL 345E preferred (may also count toward Option D)

Nature of Science (C or better required): CHEM 121N, CHEM 122N, CHEM 123N, and CHEM 124N required (CHEM 103 may be needed as a prerequisite--consult advisor)

Impact of Technology: Met in the major with HLSC 485

Upper-Division General Education

- Option A: Disciplinary Minor (a minimum of 12 hours determined by the department) or Second Major or Second Degree
- 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: Six hours of elective upper-division courses from outside the College of Health Sciences and not required by the student's major.

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.

Pre-Clinical Studies Major

General Education

Complete lower-division requirements 32-41

Complete upper-division requirements (minimum of 6 credit hours) 3-6

Prerequisite Course *

HLTH 120G Information Literacy for Health Professions 3

Core Courses BSHS *

HLSC 320 Health Equity and Disability Culture 3

HMSV 339 Interpersonal Relations 3

HLSC 390 The U.S. Healthcare Delivery System 3

HLSC 468 Internship 3

HLSC 483 Artificial Intelligence Applications in Health (or AI 483) 3

or HLSC 485 Health Informatics

STAT 130M Elementary Statistics 3

Pre-Clinical Studies *

NMED 300 Medical Terminology 3

HLSC 445 Health Sciences Research Methods 3

BIOL 250 Human Anatomy and Physiology I 4

BIOL 251 Human Anatomy and Physiology II 4

Select one of the following: 3

MLS 403W Management in the Clinical Setting

EXSC 431W Wellness Programming and Administration

PUBH 430W Community Health Resources and Health Promotion

Pre-Clinical Studies Electives * **30**

Total Credit Hours **103-115**

* Grade of C or better required.

Please contact your Virginia Health Sciences advisor for guidance on elective selection for specific pathways of study. Pre-Clinical Studies Electives may be selected from the following course options:

Biology: BIOL 121N, BIOL 122N, BIOL 123N, BIOL 124N, BIOL 150, BIOL 151, BIOL 293, BIOL 294, BIOL 316, BIOL 317

Chemistry: CHEM 211, CHEM 212, CHEM 213, CHEM 214, CHEM 441

Exercise Science: EXSC 322, EXSC 326, EXSC 327, EXSC 408, EXSC 417

Health Sciences: HLSC 318, HLSC 405 or 300/400-level HLSC Study Abroad course

Medical Diagnostic and Translational Sciences: MDTS 400, MDTS 401

Medical Laboratory Science: MLS 307, MLS 308, MLS 310, MLS 313, MLS 420, MLS 468, MLS 339, MLS 340

Nuclear Medicine Technology: NMED 335

Physics: PHYS 111N, PHYS 112N, PHYS 231N, PHYS 232N

Psychology: PSYC 203S, PSYC 306, PSYC 353, PSYC 405

Undergraduate Research: Directed research courses (498) from any Health Sciences or Sciences discipline may count toward elective requirements with a maximum of 6 credits in undergraduate research.

Internship

The Pre-Clinical Studies major requires the completion of an internship (HLSC 468) in the senior year, designed to build upon prior health-related experiences. The purpose of the internship is to deepen students' exposure to their chosen fields, furthering their practical knowledge to help students build competitive applications to graduate professional health programs. Volunteering in a health-related setting, certificate programs such as CNA, EMT, or Medical Assisting, or other work-based learning may qualify for the internship. Students already employed within healthcare are encouraged to actively seek new experiences that stretch beyond their current roles, ensuring a comprehensive and valuable learning outcome. An undergraduate research class (ex. HLSC 498 Directed Research in Health Sciences) may count towards the internship upon approval from the Program Director, if offered during the semester the student is scheduled to complete the internship.

Students must secure an approved internship no later than the add/drop deadline for the semester they plan to complete the internship. For assistance in identifying internship possibilities (paid or unpaid), students are strongly encouraged to contact Monarch Internship & Co-Op office in the semester prior to the planned internship: <https://www.odu.edu/internship> (<https://www.odu.edu/internship/>).

Credit may not be granted for the course retroactively, meaning: only contact hours completed at the internship site after the start of the semester may count towards the 120-hours required minimum.

Electives

Additional elective credit may be needed to meet the minimum of 120 credit hours required for the degree.

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
HLTH 120G	Information Literacy for Health Professions *	3
Mathematics (MATH 103M or MATH 102M or MATH 162M) *		3
Interpreting the Past		3
CHEM 103	Preparatory Chemistry (if needed as prerequisite to CHEM 121N) **	3
Credit Hours		15
Spring		
ENGL 211C or ENGL 231C	Writing, Rhetoric, and Research * or Writing, Rhetoric, and Research: Special Topics	3
STAT 130M	Elementary Statistics *	3
PSYC 201S or SOC 201S	Introduction to Psychology * or Introduction to Sociology	3
CHEM 121N	Foundations of Chemistry I Lecture *	3
CHEM 122N	Foundations of Chemistry I Laboratory *	1

Human Creativity		3
Credit Hours		16
Summer		
Elective or Foreign Language (if required)		3
Credit Hours		3
Sophomore		
Fall		
HLSC 320	Health Equity and Disability Culture ⁺	3
BIOL 250	Human Anatomy and Physiology I [*]	4
NMED 300	Medical Terminology [*]	3
CHEM 123N	Foundations of Chemistry II Lecture [*]	3
CHEM 124N	Foundations of Chemistry II Laboratory [*]	1
Credit Hours		14
Spring		
HMSV 339	Interpersonal Relations (Meets Oral Communication) ⁺	3
BIOL 251	Human Anatomy and Physiology II [*]	4
PHIL 345E	Bioethics (Preferred)	3
Literature		3
Pre-Clinical Elective [*]		3
Credit Hours		16
Summer		
Minor Course, Elective, or Foreign Language (if required)		3
Credit Hours		3
Junior		
Fall		
HLSC 390	The U.S. Healthcare Delivery System [*]	3
HLSC 445	Health Sciences Research Methods [*]	3
Pre-Clinical Electives [*]		6
Minor Course or Upper-Division General Education		3
Credit Hours		15
Spring		
MLS 403W OR EXSC 431W OR PUBH 430W [*]		3
Pre-Clinical Electives [*]		8
Minor Course, Elective, or Oral Communication (if HMSV 339 not taken) ^{***}		3
Credit Hours		14
Senior		
Fall		
HLSC 483 or HLSC 485	Artificial Intelligence Applications in Health (or AI 483) or Health Informatics	3
Pre-Clinical Electives [*]		9
Credit Hours		12
Spring		
HLSC 468	Internship [*]	3
Pre-Clinical Electives [*]		6

Minor Course, Elective, or Upper Division General Education+	3
Credit Hours	12
Total Credit Hours	120

- * Grade of C or better required
- ** CHEM 103 with a grade of C or better may be required as a pre-requisite for CHEM 121N. Please consult with your advisor to determine whether you need this course. If not, a general elective may be completed instead.
- *** If you completed HLSC 335 and did not complete HMSV 339, you will still need to meet the University's Oral Communication requirement. Consult your advisor for guidance.
- + Additional electives may be needed to reach 120 hours.