

Biology **Clinical Lab Sciences Concentration**

<p>FRESHMAN FALL (17 CREDITS) BIOL 120: Integrative Biology (4) CHEM 111: Fundamentals of Chemistry I (4) MATH 171: Statistical Decision Making (3) CTZN 110: Inquiry into Citizenship (3) Pillar: Human Behavior & Social Institutions (3)</p>	<p>FRESHMAN SPRING (15 CREDITS) CHEM 211: Organic Chemistry I (3) CHEM 213: Organic Chemistry I Lab (1) BIOL 250: Intro to Genetics & Cell Biology (4) ENGL 165: Writing & Rhetoric (3) Pillar: Global Citizenship (4)</p>
<p>SOPHOMORE FALL (14 CREDITS) BIOL 251: Intro to Ecology & Evolution (4) CHEM 212: Organic Chemistry II (3) CHEM 214: Organic Chemistry II Lab (1) MATH 301: Applied Statistics (3) Pillar: Aesthetic Expression (3)</p>	<p>SOPHOMORE SPRING (18 CREDITS) BIOL 288: Sophomore Seminar (3) BIOL 304: Microbiology for the Healthcare Professional (4) CHEM 112: Fundamentals of Chemistry II (4) PHYS 103: Conceptual Physics (4) Pillar: Historical & Contemporary Insights (3)</p>
<p>JUNIOR FALL (14 CREDITS) BIOL 206: Human Anatomy & Physiology I (4) BIOL 404: Immunology (4) Perspective: Integrating World Languages (3) Perspectives Course (3)</p>	<p>JUNIOR SPRING (17 CREDITS) BIOL 207: Human Anatomy & Physiology II (4) BIOL 488: Senior Capstone in Biology (3) BIOL 489: Senior Assessment (1) CTZN 410: Symposium for the Common Good (3) Perspectives Course (3) Perspectives Course (3)</p>
<p>Senior year is completed at Inova Fairfax Hospital School of Medical Laboratory Science</p>	
<p>SENIOR FALL (16 CREDITS) MT 401: Orientation to the Clinical Laboratory (1) MT 402: Clinical Hematology and Coagulation (7) MT 403: Clinical Microscopy (1) MT 407: Immunohematology (7)</p>	<p>SENIOR SPRING (14 CREDITS) MT 405: Clinical Microbiology (6) MT 406: Clinical Chemistry (8)</p>



AFTER GRADUATION

Students who earn a degree in Biology find employment in a variety of settings. We tracked recent graduates of the program, and here's what some of them are doing:

- Fisheries Management & Conservation Grad Student, University of Miami
- Assistant Scientist, PPD
- Environmental Analyst, Environmental Research Group
- Analytical Chemist, Virginia Military Institute
- Laboratory Analyst, IEH Laboratories
- Intern, Eastern Virginia Medical School
- Pharmacy School, VCU and Shenandoah University
- Clinical Research Coordinator
- ED Technician, Centra Health

GRADUATE PROFILE

Madison Humerick, class of 2009

Madison Humerick is an assistant professor in the Department of Family Medicine at WVU Eastern Division Campus and a practicing family doctor. She says she wouldn't have gone on to medical school without a timely push from her mentor, Dr. Consuelo Alvarez, who knew she was ready for a bigger challenge. That push was to pursue a post-



baccalaureate research fellowship at the National Institutes of Health in Maryland. "She had the capability to thrive in that environment, which she did," said Alvarez. "That experience really propelled her to medical school, where she blossomed into the fine doctor she is now."

Whether it's the small classes, the open-door policy of faculty or the intrinsic spirit of the place, these

kinds of relationships seem to develop especially strongly at Longwood—in all shapes and sizes. Freshmen and sophomores find mentors in their older peers. Alumni take students or newly graduated seniors under their wings. Students develop close bonds with professors, coaches or staff members that endure long after graduation. Often the stories of how these mentoring relationships developed originate in the most unexpected places.

COMMON MINORS

Most minors require about 18 credits, or 6 classes. Some of these classes will also count for Core Curriculum requirements, making the addition of a minor as simple as enrolling in one class per semester.

Common minors for students of Biology include:

- Chemistry
- Criminology/Criminal Justice
- Health Education
- Neuroscience Studies
- Psychology

GRADUATE PROFILE

Savannah Barnett, class of 2015

At Longwood Savannah Barnett, who was a biology and chemistry major, caught the attention of Dr. Amorette Barber one summer when she was working on a research project with another faculty member.



The culminating moment for the two came during Barnett's senior honors thesis. The idea was Barnett's own—combining her two great loves of biology and chemistry—extracting cancer-fighting chemicals from uncommon sea sponges using a method she developed by herself.

"She was off the chart in terms of independence," said Barber. "Savannah had these incredible ideas and would come in just bubbling

about a paper she had read that made her dream about possibilities for projects." In that way, Barber saw something of herself in the young student. Both thrive on new ideas, both enjoy designing and putting new experiments into place, both work best under a great deal of pressure. Barber knew Barnett was beginning to think about a life of research, and she knew just the place for her: Dartmouth College in New Hampshire where Barnett earned a Ph.D. in 2019.