LONGWOOD

COOK-COLE COLLEGE OF ARTS AND SCIENCES

## SAMPLE 4-YEAR PLAN

#### **Biology** Pre-Med Concentration

FRESHMAN FALL (14 CREDITS)	FRESHMAN SPRING (14 CREDITS)
BIOL 120: Integrative Biology (4)	BIOL 250: Intro to Genetics & Cell Biology (4) or BIOL 251
CHEM 111: Fundamentals of Chemistry I (4)	CHEM 211: Organic Chemistry I (3)
MATH 171: Statistical Decision Making (3)	CHEM 213: Organic Chemistry I Lab (1)
CTZN 110: Inquiry Citizenship or ENGL 165 Writing &	ENGL 165: Writing & Rhetoric or CTZN 110(3)
Rhetoric (3)	Pillar: Human Behavior & Social Institutions (3)
SOPHOMORE FALL (16 CREDITS)	SOPHOMORE SPRING (17 CREDITS)
BIOL 251: Intro to Ecology & Evolution (4)or BIOL 250	BIOL 288: Sophomore Seminar (3)
CHEM 212 & 214: Organic Chemistry II with Lab(4)	CHEM 112: Fundamentals of Chemistry II (4)
Pillar: Global Citizenship (3)	BIOL 324: Genetics (4)
MATH 301: Applied Statistics (3)	Perspective: Integrating World Languages (3)
BIOL 490/494/496/498 : Internship (1)	PSYC 101: Intro to Psyc or PSYC 230 (3)
JUNIOR FALL (16 CREDITS)	JUNIOR SPRING (17 CREDITS)
BIOL 326: Cell Biology (4)	BIOL 302 or BIOL 303 Human Anatomy & Physiology II (4)
PHYS 120: General Physics I (4)	BIOL 400-level Elective (3)
BIOL 301 or BIOL 306: Vertebrate Physiology (4)	PHYS 121: General Physics II (4)
BIOL 301 or BIOL 306: Vertebrate Physiology (4) BIOL 412: Biochemistry (4)	
	PHYS 121: General Physics II (4)
	PHYS 121: General Physics II (4) Perspectives Course or Civitae Pillar(3)
BIOL 412: Biochemistry (4)	PHYS 121: General Physics II (4) Perspectives Course or Civitae Pillar(3) Civitae Pillar (3)
BIOL 412: Biochemistry (4) SENIOR FALL (14 CREDITS)	PHYS 121: General Physics II (4) Perspectives Course or Civitae Pillar(3) Civitae Pillar (3) SENIOR SPRING (14-17 CREDITS)
BIOL 412: Biochemistry (4)  SENIOR FALL (14 CREDITS) BIOL 400-level Elective (4)	PHYS 121: General Physics II (4) Perspectives Course or Civitae Pillar(3) Civitae Pillar (3) SENIOR SPRING (14-17 CREDITS) BIOL 488: Senior Capstone in Biology (3)
BIOL 412: Biochemistry (4) <b>SENIOR FALL (14 CREDITS)</b> BIOL 400-level Elective (4) BIOL ECO/EVO Pillar Course (4)	<ul> <li>PHYS 121: General Physics II (4)</li> <li>Perspectives Course or Civitae Pillar(3)</li> <li>Civitae Pillar (3)</li> <li>SENIOR SPRING (14-17 CREDITS)</li> <li>BIOL 488: Senior Capstone in Biology (3)</li> <li>BIOL 489: Senior Assessment (1)</li> </ul>

This plan is only an example and does not include all course options. Always consult your advisor before selecting courses.

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# GRADUATE INFORMATION

# **Biology-Pre Med**

### 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.