



COLLEGE OF ARTS AND SCIENCES

**BIOLOGY**  
**PRE-PROFESSIONAL CONCENTRATION**

1-800-334-4111 • WWW.CAMPBELL.EDU

**THE CAMPBELL PROGRAM**

The Pre-Professional program is a concentration within the Biology major. Our objective is to prepare undergraduates for admission to post-graduate professional degree programs such as M.D., Medical Doctor; D.V.M., Doctor of Veterinary Medicine; O.D., Doctor of Optometry; D.D.S., Doctor of Dental Surgery; D.O., Doctor of Osteopathic Medicine; P.A., Physician Assistant; Physical Therapy and M.S./Ph.D, Medical Science/Doctorate graduate programs. Our courses are also designed for those interested in related healthcare careers in teaching, government and private industry.

Within the Biology major, we present the biological sciences from the perspective of purpose and faith. Our program is substantial; Campbell has approximately 150 biology majors pursuing the Pre-Professional track, completing nine required courses and choosing from more than 10 electives each year.

**THE CAMPBELL APPROACH**

We strive to present a balance between the theoretical and the practical by spending equal amounts of time in lecture and lab. Labs typically range from 15-26 students. While pursuing the Pre-Professional track, you will also be encouraged to do independent research under faculty direction or a voluntary internship with a health-related organization.

We have extensive resources including modern laboratory equipment and instrumentation. You will also find:

- Three analog video microscopes and three digital video microscopes
- Multimedia classrooms and laboratories
- 24 wireless laptop computer, printers and course related software
- Eight mobile UV/VIS spectroscopy workstations
- Five laminar flow hoods, two CO<sub>2</sub> incubators, three PCR thermocyclers and four inverted phase-contrast microscopes
- Two mobile digital multimedia presentations stations
- LI-COR 4300 DNA Analysis System
- 12 canoes
- 17 ft. research boat with 90 HP outboard motor

**THE CAMPBELL FACULTY**

Our faculty's strong academic credentials are complemented by vast teaching expertise in a wide variety of subjects. Their research interests are also diverse, encompassing cell-to-cell communications

**For more information about the program contact:**  
**1-800-334-4111, ext. 1730 • 910-893-1730**  
**biology@campbell.edu**

through signal transduction, molecular genetics, population dynamics and ecology, limnology horticulture, plant tissue culture and bioengineering, taxonomy, canine and ruminant digestive physiology, and immunity to infectious diseases.

As importantly, you will find faculty members are approachable, friendly and regularly available for "walk-in" discussions. If you're on the Pre-Professional track, you will have an adviser who is an active member of the Health Professional Advisors of North Carolina. Students are also encouraged to get to know professors and fellow majors outside the classroom through the Walker Biology Club and Pre-Medical/Allied Health Honor Society.

**THE CAMPBELL STUDENT**

The health sciences are an intensely competitive field. We are seeking serious, highly motivated students who want to be successful in attaining their goals while helping others in the process. Generally speaking, our students are well-grounded in trigonometry, biology, chemistry and physics before arriving at Campbell.

To be competitive in applying for health professional schools, you should expect to maintain an overall college GPA of 3.25 or better. The most competitive entrance requirements are in Physical Therapy and Veterinary Medicine; a record of straight A's is sometimes required in these fields.

About 10% of our graduates immediately pursue postgraduate studies. The acceptance rate among those highly qualified students who apply to medical school from Campbell's program is 80%. Ultimately, most of our students find excellent positions in industry or health service labs.



# CURRICULUM OUTLINE

## Biology, Pre-Professional Concentration

### FRESHMAN YEAR

SEMESTER 1			SEMESTER 2		
		HRS			HRS
ENGLISH FUNDAMENTALS	ENGL 100	3	ENGLISH COMP I	ENGL 101	3
FOREIGN LANG	102	3	FOREIGN LANG	201	3
WESTERN CIV I	HIST 111	3	WESTERN CIV II	HIST 112	3
TRIGONOMETRY	MATH 112	3	STATISTICS	MATH 160	3
BASIC BIOLOGY	BIOL 111	4	BOTANY	BIOL 202	4
CU WORSHIP	CUW 100	0.5	CU WORSHIP	CUW 100	0.5

### SOPHOMORE YEAR

SEMESTER 3			SEMESTER 4		
		HRS			HRS
ZOOLOGY	BIOL 203	4	CELL & MOL BIOL	BIOL 201	4
GENERAL CHEMISTRY I	CHEM 111	4	GENERAL CHEMISTRY II	CHEM 113	4
ENGLISH COMP II	ENGL 102	3	ENGLISH LITERATURE	ENGL LIT	3
INTRO TO BIO RESEARCH	BIOL 205	3	INTRO TO CHRISTIANITY	RELG 125	3
CALCULUS	MATH 122	3	ELECTIVE		3
CU WORSHIP	CUW 200	0.5	CU WORSHIP	CUW 200	0.5

### JUNIOR YEAR

SEMESTER 5			SEMESTER 6		
		HRS			HRS
ORGANIC CHEMISTRY I	CHEM 227	4	ORGANIC CHEMISTRY II	CHEM 228	4
ENGLISH LITERATURE	ENGL LIT	3	GENETICS	BIOL 342	4
PHYSICS I	PHYS 221	3	PHYSICS II	PHYS 222	3
BIOLOGY ELECTIVE	BIOL	4	PE ACTIVITY	PE 111	1
			RELIGION ELECTIVE	RELG	3

### SENIOR YEAR

SEMESTER 7			SEMESTER 8		
		HRS			HRS
BIOLOGY ELECTIVE	BIOL 320		ECOLOGY	BIOL 327	4
OR		4	BIOLOGY ELECTIVE	BIOL	
BIOCHEM	BIOL 430		OR		4
SENIOR SEMINAR	BIOL 451	1	ART/MUSIC/THEATRE	131	3
SOCIAL SCIENCE ELECTIVE		3	ELECTIVE		3
SOCIAL SCIENCE ELECTIVE		3			
LIFETIME WELLNESS	PE 185	2			
BIOLOGY ELECTIVE	BIOL	3			

**TOTAL HOURS 128**

*English* – Students with an SAT verbal score below 450 will be enrolled in ENGL 100; 450-699 students will be enrolled in ENGL 101; 700 and above with at least a “B” average in high school students will be enrolled in ENGL 102.

*English Literature* – The ENGL LIT requirement may be satisfied by completing any two of the following literature courses: ENGL 201, 202, 203, 204 or 205, or with a 300-level Foreign LANG LIT.

*Foreign Language* – Students are required to pass a 201-level Foreign LANG.

*Social Science* – Courses that meet this requirement may be selected from CRIM, ECON, GEO, POLS, HIST, PHIL, PSYC and SOCI.

*Electives* – Any course may be used for an elective; however, carefully chosen electives will allow for a minor.

#### BIOLOGY ELECTIVES

BIOL 215 Plants for Pleasure & Profit; BIOL 221 Human Anatomy & Physiology; BIOL 224 Vertebrate Natural History; BIOL 226 Ornithology; BIOL 241 Field Botany; BIOL 250 Histology; BIOL 310 Advanced Human Physiology; BIOL 315 Bioinformatics; BIOL 319 Biomedical Ethics; BIOL 320 Developmental Anatomy; BIOL 321 Environmental Toxicology; BIOL 322 Aquatic Ecology; BIOL 333 General Parasitology; BIOL 334 Microbiology; BIOL 335 Immunology; BIOL 336 Medical Microbiology; BIOL 350 Advanced Cell & Molecular Biochemistry; BIOL 351 Creation, Evolution, or Both?; BIOL 441 Biology Research; BIOL 465 Biology Internship; BIOL 508 Molecular Techniques

### The Campbell Advantage

Our program provides an exceptionally solid foundation for future success, whether you choose to work toward a professional degree in medicine or immediately enter the work force. Today's biological scientist needs capabilities extending beyond the lab and classroom. They must be well-grounded in ethics, research, writing and technology. We are convinced Campbell is uniquely qualified to give you the foundation on which to build your specialization because...

- We combine a core curriculum with a vast array of biology-related courses and resources.
- We have a faculty committed to outstanding teaching and to helping you achieve your goals.
- We are a university dedicated to quality liberal arts education, free enterprise and our Christian Mission.

The major requirements outlined within this brochure are intended as a guideline, and the curriculum outlines are only a sample. The most recent copy of the University's Undergraduate Studies Bulletin is the official source related to curriculum guidelines. It is the student's responsibility to consult with his/her academic adviser.