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 over 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, an inverted fluorescent microscope.
- Multimedia classrooms and laboratories
- 72 wireless laptop computer, printers, and course related software
- Eight mobile UV/VIS spectroscopy workstations
- Two mobile digital multimedia presentations stations
- LI-COR 4300 DNA Analysis System
- 10 canoes and 4 kayaks
- 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 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.

The acceptance rate among those highly qualified students who apply to medical school from Campbell’s program is approximately 80%. Ultimately, most of our students find excellent positions in industry or health service labs.
## Curriculum Outline
### Biology, Pre-Professional Concentration

### Freshman Year

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>HRS</th>
<th>Semester 2</th>
<th>HRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Fundamentals</td>
<td>ENGL 100</td>
<td>3</td>
<td>Academic Writing</td>
</tr>
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<td>Foreign Lang</td>
<td>102</td>
<td>3</td>
<td>Foreign Lang</td>
</tr>
<tr>
<td>Western Civ I</td>
<td>HIST 111</td>
<td>3</td>
<td>Western Civ II</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>MATH 112</td>
<td>3</td>
<td>Statistics</td>
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<tr>
<td>Basic Biology</td>
<td>BIOL 111</td>
<td>4</td>
<td>Botany</td>
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<td>Connections</td>
<td>CUW 100</td>
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<td>Connections</td>
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<tr>
<td>Freshman Seminar</td>
<td>CUSB 100</td>
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### Sophomore Year

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<thead>
<tr>
<th>Semester 3</th>
<th>HRS</th>
<th>Semester 4</th>
<th>HRS</th>
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</thead>
<tbody>
<tr>
<td>Zoology</td>
<td>BIOL 203</td>
<td>4</td>
<td>Cell &amp; Mol Biology</td>
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<tr>
<td>General Chemistry I</td>
<td>CHEM 111</td>
<td>4</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td>Academic Writing &amp; Lit</td>
<td>ENGL 102</td>
<td>3</td>
<td>English Literature</td>
</tr>
<tr>
<td>Intro to Bio Research</td>
<td>BIOL 205</td>
<td>3</td>
<td>Intro to Christianity</td>
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<tr>
<td>Calculus</td>
<td>MATH 122</td>
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<td>Elective</td>
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<tr>
<td>Connections</td>
<td>CUW 200</td>
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### Junior Year

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<th>HRS</th>
<th>Semester 6</th>
<th>HRS</th>
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<tbody>
<tr>
<td>Organic Chemistry I</td>
<td>CHEM 227</td>
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<td>Organic Chemistry II</td>
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<tr>
<td>English Literature</td>
<td>ENGL LIT</td>
<td>3</td>
<td>Genetics</td>
</tr>
<tr>
<td>Physics I</td>
<td>PHYS 221</td>
<td>3</td>
<td>Physics II</td>
</tr>
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<td>Biology Elective</td>
<td>BIOL 4</td>
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<td>PE Activity</td>
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<td></td>
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<td>Religion Elective</td>
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### Senior Year

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<th>Semester 7</th>
<th>HRS</th>
<th>Semester 8</th>
<th>HRS</th>
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</thead>
<tbody>
<tr>
<td>BIOL Elect or Biochem</td>
<td>BIOL 430</td>
<td>4</td>
<td>BIOL Elect or Animal Phys</td>
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<tr>
<td>BIOL 438 or BIOL Elective</td>
<td>BIOL 438</td>
<td>4</td>
<td>Ecology</td>
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<td>Social Science Elective</td>
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<td>Senior Seminar</td>
<td>BIOL 451</td>
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<td>Social Science Elective</td>
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<td>ART/Music/Theatre</td>
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</tr>
<tr>
<td>Elective</td>
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<td>Elective</td>
<td></td>
</tr>
</tbody>
</table>

Campbell requires 124 hours to graduate. Some majors may require more.

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**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.

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### 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 Language.

### Math

- MATH 112 may be waived if a student has taken MATH 122.

### Social Science

- Courses that meet this requirement may be selected from COMM (240), 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

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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.
Pre-Professional Pathways

Pre-Medical

Students should check the specific requirements for each medical school program. Some schools may have additional requirements. The MCAT is required for admission to medical school.

The following Biology courses are required for most medical programs:
- Biol 221 Human Anatomy and Physiology
- Biol 334 Microbiology
- Biol 430 Biochemistry

The following Biology courses are recommended for most medical programs:
- Biol 310 Advanced Human Physiology
- Biol 320 Developmental Vertebrate Anatomy
- Biol 335 Immunology
- Biol 336 Medical Microbiology
- Biol 437 Animal Physiology
- Psyc 222 General Psychology
- Sosi 225 General Sociology

A student will significantly strengthen his/her application to medical school with the addition of work experience in a medical setting. This work may include volunteer, CNA, EMT, medical missions work, etc. Any work which includes patient contact is preferred.

Pre-Dental

Students should check the requirements for each dental school program. Some schools may have additional requirements. The DAT is required for admission to dental school.

The following Biology courses are required for most dental programs:
- Biol 221 Human Anatomy and Physiology
- Biol 334 Microbiology
- Biol 320 Developmental Vertebrate Anatomy

The following Biology courses are recommended for most dental programs:
- Biol 430 Biochemistry
- Molecular Biology
- Psyc 222 General Psychology
- Sculpture and Art
- Business
- Computer Science
**Graduate School and Optometry School**

Students should check the specific requirements for admission. The GRE is required for admission to graduate school, and the OAT is required for admission to optometry school.

**Veterinary School**

Students should check the requirements for each school program. Some schools may have additional requirements. The VCT or GRE is required for admission to veterinary school.

The following courses are required for most veterinary programs:
- Biol 334 Microbiology or Biol 336 Medical Microbiology
- Six hours of business courses
- At least one course in Animal Science or Animal Nutrition

The following courses are recommended for most veterinary programs:
- Biol 320 Developmental Vertebrate Anatomy
- Biol 334 Microbiology
- Biol 430 Biochemistry
- Biol 437 Animal Physiology

Most veterinary schools require animal experience (working with livestock, showing and/or breeding dogs, working at a zoo, equestrian activities, etc.). Pet ownership does not apply. Most veterinary programs also require work experience in the veterinary field. Experience in small animal medicine, large animal medicine, and one other area of veterinary medicine is preferred. All veterinary experience should be under the supervision of a DVM or PhD. Please check with each veterinary program for specific work related requirements.