Biomedical Science

Bachelor of Science

Pre-Medicine Concentration

The Biomedical Science major is designed for highly motivated students who are considering a career in health science areas such as medicine, dentistry or veterinary medicine. The major focuses on those disciplines of the natural sciences and mathematics which will assist students in their preparation for matriculation into professional or graduate schools.

Career Options:

- Medical Careers (with graduate training)
- Public Health Careers
- Academic Research in University Settings
- Research and Product Development in Medical Supply and Pharmaceutical Industries
- Laboratory Technology

Major Requirements:

Life Science w/Lab
Methods in Biology
Cell Biology
Evolution
Genetics
Senior Seminar
General Chemistry I w/Lab
General Chemistry II w/Lab
Organic Chemistry I w/Lab
Organic Chemistry II w/Lab
Calculus I
Elementary Statistics
General Physics I w/Lab
General Physics II w/Lab

Concentration Requirements:

Pre-Medicine:
Anatomy and Physiology I
Anatomy and Physiology II

Choose one course from each of the following tiers (at least two must be laboratory courses).

Animal Tier:
Developmental Biology with lab or Vertebrate Zoology or Pathophysiology

Cell and Molecular Tier:
Microbiology or Histology or Cancer Biology or Molecular Evolution or Microbiology

Experimental Design Tier:
Environmental Science with lab or Global Water Issues or Ecology with lab or Physiological Ecology

Choose to take Biochemistry or one additional course from either the Animal Tier or the Cell and Molecular Tier.

Additional Information:

Additional coursework may be required for admission into a specific school's program and entry into professional school may require a specific number of hours in related volunteer work.

Department Contact:

John G. Temple, Ph.D.
Professor of Biology
Biomedical Sciences Program Coordinator
jgtemple@ncwc.edu
252.985.5160

NORTH CAROLINA WESLEYAN UNIVERSITY

800.488.6292 | 252.985.5100 | ncwc.edu

Biomedical Science

BS Undergraduate Plan

General Education Requirements

I. Interdisciplinary Requirements

	Credits
Ethics	3
International Studies	3
Total Hours	6

II. Science Courses

	Credits
Mathematics	3
Biology, including lab	4
Physics, Earth Science or Chemistry, incl. lab	4
Total Hours	11

III. Social Science Courses

	Credits
History, Political Science	3
Communication, Economics, Geography or Criminal Justice	3
Psychology or Sociology	3
Total Hours	9

IV. Humanities Courses

	Credits
Religion	3
English Composition	6
Literature	3
Art, Music or Entertainment/Theatre	3
Total Hours	15
TOTAL GENERAL EDUCATION HOURS	**41**

Unless otherwise specified, transferred credits may be used to fulfill the general requirements at the Registrar's discretion.

Major Requirements

		Credits
BIO 101	Life Science	3
BIO 102	Life Science Lab	1
BIO 123	Methods in Biology	2
BIO 200	Cell Biology	3
BIO 222	Evolution	3
BIO 303	Genetics	4
BIO 499	Senior Seminar	3
CHM 111	General Chemistry I	3
CHM 112	General Chemistry I Lab	1
CHM 121	General Chemistry II	3
CHM 122	General Chemistry II Lab	1
CHM 301	Organic Chemistry I	3
CHM 302	Organic Chemistry Lab I	1
CHM 311	Organic Chemistry II	3
CHM 312	Organic Chemistry Lab II	1
MAT 121	Calculus I	3
MAT 213	Elementary Statistics	3
PHY 211	General Physics I	3
PHY 212	General Physics I Lab	1
PHY 221	General Physics II	3
PHY 222	General Physics II Lab	1

A customized plan will be developed for each student.

Concentration Reqs.

Credits

Pre-Medicine:

BIO 231	Anatomy and Physiology I	4
BIO 232	Anatomy and Physiology II	4

Choose one course from each of the following tiers (at least two must be laboratory courses).

Animal Tier:

BIO 308 Developmental Biology	3
BIO 309 Developmental Biology Lab	1
BIO 314 Vertebrate Zoology	4
or BIO 406 Pathophysiology	3

Cell and Molecular Tier:

BIO 316 Microbiology	4
BIO 408 Histology	4
BIO 396 Cancer Biology	4
BIO 407 Molecular Evolution	4

Experimental Design Tier:

BIO 325 Enviornmental Sci. w/Lab	4
or BIO 330 Global Water issues	5
or BIO 401/402 Ecology w/Lab	5
or BIO 404 Physiological Ecology	4

Choose to take Biochemistry or one additional course from either the Animal Tier or the Cell and Molecular Tier. Recommended: Psychology (see medical school requirements for specific choices)

General Graduation Guidelines:

Total of 120 semester hours, 39 of which must be numbered 300 or 400.
(Other programs may require coursework beyond 120 semester hours.)
At least 9 semester hours of courses designated as writing intensive.
A declared major.
A cumulative GPA average of C (2.00) and at least a C average in the graduation major.