

## B.S. in Biology: Biomedical Emphasis (BMED) 2025-2026

| Freshman Year           |                                   |         |  |                      |                                   |         |
|-------------------------|-----------------------------------|---------|--|----------------------|-----------------------------------|---------|
| Fall                    |                                   |         |  | Spring               |                                   |         |
| Course Number           | Course Title                      | Credits |  | Course Number        | Course Title                      | Credits |
| UNV 1000                | Freshman Seminar                  | 1       |  | ENG 1060             | Composition II                    | 3       |
| ENG 1050                | Composition I                     | 3       |  | BIO 1020             | General Zoology                   | 4       |
| MAT 1070 or<br>MAT 1090 | College Algebra or<br>Precalculus | 3-4     |  | MAT 2100             | Introduction to<br>Statistics     | 3       |
| BIO 1000*               | Principles of Biology             | 3       |  | CHM 1300             | General Chemistry I               | 3       |
| BIOL 1000               | Lab. Inv. & Exp. in<br>Gen. Bio.  | 1       |  | CHM 1100             | General Chemistry<br>Laboratory I | 1       |
| PSY 1010                | Introduction to<br>Psychology     | 3       |  | General Education    | Physical Education                | 1       |
| <b>Total Credits</b>    |                                   | 14-15   |  | <b>Total Credits</b> |                                   | 15      |

| Sophomore Year          |  |         |  |   |  |         |
|-------------------------|--|---------|--|---|--|---------|
| Fall                    |  |         |  | Spring                                  |  |         |
| Course Number           | Course Title                                   | Credits |  | Course Number                           | Course Title                                   | Credits |
| BIO 2110 or<br>BIO 2120 | Anatomy &<br>Physiology I or II                | 4       |  | BIO 2110 or<br>BIO 2120                 | Anatomy & Physiology<br>I or II                | 4       |
| CHM 1310                | General Chemistry II                           | 3       |  | CHM 2500                                | Organic Chemistry I                            | 3       |
| CHM 1110                | General Chemistry<br>Laboratory II             | 1       |  | CHM 2520                                | Organic Chemistry I<br>Lab                     | 1       |
| MAT 2150 or<br>MAT 2210 | Calculus with<br>Applications or<br>Calculus I | 4       |  | General Education<br>(ICC) <sup>1</sup> | Fine Art                                       | 3       |
| General Education       | Literature                                     | 3       |  | BIO 4700 (WD) <sup>2</sup>              | Reading and Writing in<br>the Natural Sciences | 3       |
|                         |  |         |  | General Education                       | History  | 3       |
| <b>Total Credits</b>    |  | 15      |  | <b>Total Credits</b>                    |  | 17      |

| Junior Year                             |                             |         |  |                      |                        |         |
|---|-----------------------------|---------|--|----------------------|------------------------|---------|
| Fall                                    |                             |         |  | Spring               |                        |         |
| Course Number                           | Course Title                | Credits |  | Course Number        | Course Title           | Credits |
| BIO 3150                                | Microbiology                | 4       |  | PHY 1500             | College Physics I      | 3       |
| CHM 3110                                | Biochemistry                | 3       |  | PHY 1560             | College Physics I Lab  | 1       |
| CHM 2510                                | Organic Chemistry II        | 3       |  | BIO 2180             | Principles of Genetics | 4       |
| CHM 2530                                | Organic Chemistry II<br>Lab | 1       |  | BIO 3040             | Principles of Ecology  | 4       |
| General Education<br>(ICC) <sup>1</sup> | Social Science              | 3       |  | CHM 3120             | Biochemistry Lab       | 1       |
| General Education                       | Physical Education          | 1       |  | General Education    | Social Science         | 3       |
| <b>Total Credits</b>                    |                             | 15      |  | <b>Total Credits</b> |                        | 16      |

| Senior Year                           |                        |         |  |                                       |                   |         |
|---------------------------------------|------------------------|---------|--|---------------------------------------|-------------------|---------|
| Fall                                  |                        |         |  | Spring                                |                   |         |
| Course Number                         | Course Title           | Credits |  | Course Number                         | Course Title      | Credits |
| BIO 3710 (WE) <sup>2</sup>            | Cell Biology           | 4       |  | BIO 4610 (WE) <sup>2</sup>            | Animal Physiology | 4       |
| PHY 1510                              | College Physics II     | 3       |  | BMED Elective <sup>3</sup>            |                   | 3-4     |
| PHY 1570                              | College Physics Lab II | 1       |  | University-wide Elective <sup>4</sup> |                   | 3-4     |
| General Education                     | Philosophy or Religion | 3       |  | General Education                     | Elective          | 3       |
| University-wide Elective <sup>4</sup> |                        | 3       |  |                                       |                   |         |
| <b>Total Credits</b>                  |                        | 14      |  | <b>Total Credits</b>                  |                   | 13-15   |

<sup>1</sup> **Indigenous Cultures and Communities (ICC):** Students entering the university in Fall 2023 or later shall complete the ICC requirement for graduation. Students may satisfy this requirement by completing two 3-credit hour ICC-designated courses. Students who transfer over 60 or more hours shall complete one 3-credit hour ICC course. Designated ICC courses can satisfy other graduation requirements such as major electives and gen. eds.

<sup>2</sup> **Writing Intensive Program:** Students must complete a combined total of 9 credit hours of Writing Enriched (WE) and Writing in the Discipline (WD) coursework. One course must be a WD course (of any number of credits) and can be BIO 4700 or any other WD course. This degree includes 2 required courses that count as WE: BIO 4610 and BIO 3710. Double majors need only fulfill the Writing Intensive Program requirement once. NOTE: Successful completion (grade of “C” or better) of ENG 1050 is a prerequisite for all WE or WD courses.

<sup>3</sup> **Approved BMED Elective:** Students may take any of the courses from the list below to fulfill the elective option. Many courses are only offered every other year and in spring OR fall. All students should review the Biology Course Catalog to see availability.

BIO 3015. Medicinal and Poisonous Plants (3 credits) (Every Spring)

BIO 3190. Animal Parasitology (4 credits) (Even Springs)

*BIO 3200. Developmental Biology (3 credits) (not currently offered)*

BIO 3750. Neurobiology (4 credits) (Odd Springs)

BIO 3810. Immunology (3 credits) (Every Fall)

BTEC 4300. Principles of Medical Biotechnology (3 credits) (Every Spring)

<sup>4</sup> **University wide Electives:** University wide electives can be any course in any department at the university. These are required to reach the 120 hours needed for graduation. These can also be used as part of a minor.

#### Additional Notes

- **ALL GENERAL EDUCATION COURSES CAN BE INTERCHANGED**
- **\*Note:** C or higher is required in BIO 1000 to matriculate to other BIO Courses in the major
- Twelve hours of natural sciences and mathematics within this degree count toward gen. ed. requirements. Students should only take those natural sciences and mathematics courses required by the degree program.
- QPA Requirements for Baccalaureate Graduation: “Have a minimum overall cumulative quality point average of 2.0 and have a minimum cumulative quality point average of 2.0 in all work attempted at the University of North Carolina at Pembroke; Have a minimum overall cumulative quality point average of 2.0 in the major field of study”