

## B.A. REQUIREMENTS FOR CHEMISTRY (BIOLOGICAL CHEMISTRY TRACK)

To declare a B.A. major in Chemistry (Biological Track), a student must satisfy either of the following two requirements:

- 1) Earn a grade of C+ or better in General Chemistry lecture/lab courses (CHE106/107/116/117 or honors equivalents, or AP credit for CHE106/107/116/117) **AND** earn a grade of C or better in CHE 275;  
**OR**
- 2) Earn a grade of A- or better in a General Chemistry lecture course (CHE106/116/109/119) taken at Syracuse University.

Requirements include 21 credits in chemistry core courses, 6 credits from the list of approved biology/biochemistry core courses, and 9 additional credits from an approved list for a total of 36 required credits. Each student's course of study includes the following:

### 1. Required Chemistry Core Courses:

- ☐ CHE 106/107: General Chemistry Lecture/Lab **OR** CHE 109/129: General Chemistry Lecture/Lab (Majors/Honors) (4)
- ☐ CHE 116/117: General Chemistry Lecture/Lab II **OR** CHE 119/139: General Chemistry Lecture/Lab II (Majors/Honors) (4)
- ☐ CHE 275/276: Organic Chemistry Lecture/Lab (5)
- ☐ CHE 325/326: Organic Chemistry Lecture/Lab II (5)
- ☐ CHE 474: Structural and Physical Biochemistry (3)

### 2. Required Biology/Biochemistry Core Courses:

- ☐ BIO 475: Biochemistry Lab (4) **OR**
- ☐ CHE/BCM 477: Preparation & Analysis of Proteins and Nucleic Acid (3) **AND** BCM 475: Biochemistry (3)

### 3. At Least 9 Credits Chosen From:

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| <input type="checkbox"/> CHE 335: Chemical and Biochemical Analysis with Lab (4) | <input type="checkbox"/> CHE 436: Advanced Physical Chemistry (3)            |
| <input type="checkbox"/> CHE 411: Inorganic Chemistry (3)                        | <input type="checkbox"/> CHE 546: Molecular Spectroscopy and Structure (1-3) |
| <input type="checkbox"/> CHE 412: Metals in Medicine (3)                         | <input type="checkbox"/> CHE 575 Organic Spectroscopy (3)                    |
| <input type="checkbox"/> CHE 414: Introduction to Medicinal Chemistry (3)        | <input type="checkbox"/> BCM 476: Biochemistry II (3)                        |
| <input type="checkbox"/> CHE 422: Inorganic Laboratory Techniques (1)            | <input type="checkbox"/> CHE 346: Physical Chemistry (3)                     |
| <input type="checkbox"/> CHE/FSC 444: Forensic Chemical Analysis (4)             | <input type="checkbox"/> CHE 356: Physical Chemistry II (3)                  |
| <input type="checkbox"/> CHE 427: Organic Chemistry of Biological Molecules (3)  |  |

**or selected graduate courses with the instructor's approval**

### 4. Required Calculus and Physics Courses:

- ☐ MAT 285: Life Sciences Calculus I (3)  
**OR** MAT 295: Calculus I (4)
- ☐ MAT 286: Life Sciences Calculus II (3)  
**OR** MAT 296: Calculus II (2-4)
- ☐ PHY 211/221 General Physics Lecture/Lab I (4)
- ☐ PHY 212/222: General Physics Lecture/Lab II (4)

Students are strongly encouraged to take BIO 326, 327, and 465.

Students are encouraged to gain some research experience by enrolling in CHE 450, which may be substituted for a 3-credit course listed in (2) above by petitioning the department.

Students who receive a score of 5 on the AP chemistry exam will receive credit for CHE 106/116 and CHE 107/117 (8 credits)\*  
\*Pre-medical students should consult with Health Professions Advising before accepting AP chemistry credit.