

B.S. REQUIREMENTS FOR CHEMISTRY (MEDICINAL CHEMISTRY TRACK)

To declare a B.S. major in Chemistry (Medicinal Chemistry 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.

At least 37 credits in chemistry core courses are required for the B.S. degree. 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 450: Introduction to Chemical Research (at least 3 credits)
- ☐ CHE 335: Chemical and Biochemical Analysis with Lab (4)
- ☐ CHE 412: Metals in Medicine (3)
- ☐ CHE 414: Introduction to Medicinal Chemistry (3)
- ☐ CHE 427: Organic Chemistry of Biological Molecules (3)
- ☐ CHE 474: Structural & Physical Biochemistry (3)

2. At Least 7 Credits in Biology:

- ☐ BIO 121: General Biology (4)
- ☐ BIO 305: Integrative Biology Laboratory (3)

Note: BIO 305 requires BIO 326 or BIO 327 as a prerequisite. This prerequisite must be completed before enrolling in BIO 305, the classes cannot be taken concurrently.

If taken in an appropriate area of research, additional credit in CHE 450 beyond the 3 credits required in (1) above may be substituted for up to 4 laboratory credits with the department's approval.

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.

3. At least 3 Credits Chosen From:

- ☐ CHE 346: Physical Chemistry (3)
- ☐ CHE 356: Physical Chemistry II (3)
- ☐ CHE 411: Inorganic Chemistry (3)
- ☐ CHE 436: Advanced Physical Chemistry (3)
- ☐ CHE/FSC 444: Forensic Chemical Analysis (4)
- ☐ CHE 477: Proteins & Nucleic Acids Lab (3)
- ☐ CHE 546: Molecular Spectroscopy & Structure (1)
- ☐ CHE 575: Organic Spectroscopy (3)
- ☐ BCM 475: Biochemistry I (3)
- ☐ BCM 476: Biochemistry II (3)
- ☐ BCM 484: Biomolecular Modeling (3)
- ☐ BEN 433: Drug Delivery (3)
- ☐ BIO 409: General Microbiology (4)
- ☐ BIO 422: Bioinformatics for Life Scientists (3)
- ☐ BIO 447: Basic Immunology (3)
- ☐ BIO 462: Molecular Genetics (3)
- ☐ BIO 463: Molecular Biotechnology (4)
- ☐ BIO 464: Applied Biotechnology (4)
- ☐ BIO 465: Molecular Biology Laboratory (3)
- ☐ BIO 501: Biology of Cancer (3)
- ☐ FSC 453: Forensic Toxicology (3)

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: General Physics Lecture I (3)
- ☐ PHY 212: General Physics Lecture II (3)
- ☐ PHY 221: General Physics Laboratory I (1)
- ☐ PHY 222: General Physics Laboratory II (1)