

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 40 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)
- ☐ CHE 477: Proteins & Nucleic Acids Lab (3)

2. At Least 4 Credits in Biology:

- ☐ BIO 121: General Biology (4)

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 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)