B.S. DEGREE REQUIREMENTS FOR 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 and laboratory 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.

Each student's course of study should include the following:

1.) Chemistry Core Courses (at least 37 credits)

- ☐ CHE 106: General Chemistry Lecture I (3)
- ☐ CHE 116: General Chemistry Lecture II (3)

OR

- ☐ CHE 109: General Chemistry Lecture I (Honors & Majors) (3)
- ☐ CHE 119: General Chemistry Lecture II (Honors & Majors) (3)

- ☐ CHE 107: General Chemistry Lab I (1)
- ☐ CHE 117: General Chemistry Lab II (1)

OR

- ☐ CHE 129: General Chemistry Lab I (Honors & Majors) (1)
- ☐ CHE 139: General Chemistry Lab II (Honors & Majors) (1)

- ☐ CHE 275: Organic Chemistry Lecture I (3)
- ☐ CHE 276: Organic Chemistry Laboratory I (2)
- ☐ CHE 325: Organic Chemistry Lecture II (3)
- ☐ CHE 326: Organic Chemistry Laboratory II (2)
- ☐ CHE 335: Chemical and Biochemical Analysis w/ Lab (4)
- ☐ CHE 412: Metals in Medicine (3)
- ☐ CHE 414: Introduction to Medicinal Chemistry (3)
- ☐ CHE 427: Organic Chemistry of Biological Molecules (3)
- ☐ CHE 450: Introduction to Chemical Research (1-4) (at least 3 credits)
- ☐ CHE 474: Structural & Physical Biochemistry (3)

2.) At least 7 credits in Biology:

- ☐ BIO 121 General Biology I (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.

3.) At least 3 credits in elective courses selected from:

- ☐ CHE 346: Physical Chemistry (3)
- ☐ CHE 356: Physical Chemistry II (3)
- ☐ CHE 411: Inorganic Chemistry (3)
- ☐ CHE 425: Crystallography (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)
- ☐ BIO422: 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 Math *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)

If taken in an appropriate research area, additional CHE 450 credit beyond the 3 credits required in (1) may substitute for up to 4 laboratory credits with department 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 cr)*

*Pre-medical students should consult with Health Professions Advising before accepting AP chemistry credit.

Last updated: August 9, 2017