

DePauw University Department of Chemistry & Biochemistry
Checklist of Requirements for the Biochemistry Major

Required Introductory Core Courses (4.25 cr)

- Chem 120: Structure & Properties of Organic Molecules (1.0 cr)
- Chem 130: Structure & Properties of Inorganic Compounds (1.0 cr)
- Chem 170: Stoichiometric Calculations (0.25 cr)
- Chem 240: Structure & Function of Biomolecules (1.0 cr) (prerequisite: Chem 120 and 170)
- Chem 260: Thermodynamics, Kinetics and Equilibrium (1.0 cr) (prerequisite: Chem 120 or 130 and 170)

Required Upper-Level Courses (3.0 cr) **Introductory core must be completed prior to these courses**

- Chem 310: Enzyme Mechanisms (1.0 cr)
- Chem 343: Advanced Biochemistry (1.0 cr)
- Chem 440: Biophysical Chemistry (1.0 cr)

Elective Courses: (2 credits chosen from the following; one course must be a full credit with a lab and not be research.)

0.5 credit courses

- Chem 342: Topics in Biochemistry
- Chem 331: Inorganic Reaction Mechanisms
- Chem 332: Inorganic Synthesis
- Chem 351: Chemometrics
- Chem 352: Analytical Equilibria
- Chem 353: Instrumental Methods of Analysis
- Chem 361: Chemical Kinetics
- Chem 362: Chemical Thermodynamics
- Chem 363: Quantum Mechanics in Chemistry

1.0 credit courses

- Bio 250: Microbiology
- Bio 320: Genetics
- Bio 325: Bioinformatics
- Bio 335: Animal Physiology
- Bio 361: Immunology
- Bio 381: Cell Signaling in Physiology
- Bio 385: Molecular Neurobiology
- Bio 415: Molecular Genetics and Genomics

The following may apply w/approval of advisor, provided they involve a biochemical topic.

No more than 0.5 credit of research may apply.

- Chem 335, 354, 364: Topics in different subdisciplines in chemistry (0.5 cr)
- Bio 390: Topics (variable)
- Chem 395: Independent Study (variable)
- Chem 405: Thesis (0.25)
- Bio 490: Research Problems (0.5 cr)

Total for the Major: 9.25 credits NOTE: At least 3.0 courses must be at 300 level or above

Senior Comprehensive: Attendance at 12 department seminars during Jr/Sr years*
 Successful completion of comprehensive exam (Sr year)

* The seminar requirement is reduced by 3 only if a student is off campus in an approved study program. In no case will the requirement be reduced below 9 seminars.

Courses Required via Prerequisites

- Bio 101: Molecules, Genes & Cells (1.0 cr) (prerequisite for Chem 343, 440)
- Bio 315: Molecular Biology (1.0 cr) (prerequisite for Chem 440)
- Phys 120: Principles of Physics I (1.0 cr) (prerequisite for Chem 440)
- Math 151: Calculus I (1.0 cr) (prerequisite for Chem 440)