

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

Required 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, Equilibria, and Kinetics (1.0 cr) (prerequisite: Chem 120 or 130 and 170)

Advanced Courses **Core must be completed prior to these courses**

*Courses in Chemical Reactivity (1.5 cr; must include one lab course)*

- Chem 320: Organic Mechanisms & Synthesis (1.0 cr; includes lab)
- Chem 331: Inorganic Reaction Mechanisms (0.5 cr; no lab)
- Chem 332: Inorganic Synthesis (0.5 cr; lab only)
- Chem 335: Topics in Chemical Reactivity (0.5 cr)

*Courses in Chemical Analysis (1.5 cr total including Chem 450)*

- Chem 351: Chemometrics (0.5 cr)
- Chem 352: Analytical Equilibria (0.5 cr)
- Chem 353: Instrumental Analysis (0.5 cr)
- Chem 354: Topics in Chemical Analysis (0.5 cr)
- Chem 450: Method Development (0.5 cr - **required**)

*Courses in Theoretical & Computational Chemistry (1.5 cr total including Chem 460)*

- Chem 361: Chemical Kinetics (0.5 cr)
- Chem 362: Chemical Thermodynamics (0.5 cr)
- Chem 363: Quantum Mechanics in Chemistry (0.5 cr)
- Chem 364: Topics in Theoretical & Computational Chemistry (0.5 cr)
- Chem 460: Theory & Experiment (0.5 cr - **required**)

Additional Courses to make 9.25 cr total (= 0.5 cr elective beyond what is listed 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 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

- Math 151 & 152: Calculus I & II (1.0 cr each) (prerequisite for Chem 361, 362, 363)
- Physics 120 & 130: Principles of Physics I & II (1.0 cr each) (prerequisite for Chem 361, 362, 363)

Note: for ACS certification, students must take 2.0 courses in the Chemical Reactivity category (including 320 & 332), 2.0 courses in the Theoretical & Computational Chemistry category, and must complete a senior thesis (Chem 405), for a total of 10.0 courses.