

CHEMICAL PHYSICS

CURRICULUM COMMITTEE:

Paul Bonvallet (Chemistry, Chair)

Susan Lehman (Physics, Chair)

Chemical physics provides an interdisciplinary approach to the fields of chemistry and physics using mathematical techniques. The major allows students to explore the interface between chemistry and physics by studying structure, surfaces, bonding, atoms and molecules. By combining the methodologies and knowledge of physics and chemistry, many intriguing scientific questions can be addressed by a student with a strong predilection for mathematics and the physical sciences.

Major in Chemical Physics

Consists of sixteen courses:

- CHEM 11200
- MATH 11100
- MATH 11200
- PHYS 11100
- PHYS 11200
- PHYS 20100
- MATH 22100
- CHEM 31800
- CHEM 31900
- PHYS 35000
- One elective Chemistry course at the 200-level or above
- Two elective Chemistry or Physics courses at the 200-level or above
- Junior Independent Study: CHEM 40100 or PHYS 40100 (see Special Notes below)
- Senior Independent Study: CHEM 45100 or PHYS 45100
- Senior Independent Study: CHEM 45200 or PHYS 45200

Special Notes

- The Junior and Senior Independent Study courses must be in the same department.
- For students who begin in CHEM 11100, the required CHEM 31900 will count as their upper-level Chemistry elective.
- Examples of courses commonly taken as the elective Chemistry and/or Physics courses are: *Organic Chemistry* (CHEM 21100, 21200), *Analytical Chemistry* (CHEM 21500), *Inorganic Chemistry* (CHEM 34000), *Principles of Biochemistry* (BCMB 33100), *Mathematical Methods for the Physical Sciences* (PHYS 20200), *Mechanics* (PHYS 30100), *Thermal Physics* (PHYS 30200), and *Electricity and Magnetism* (PHYS 30400).
- No minor is offered in Chemical Physics.
- Students may not double major in Chemical Physics and in any of the participating departments of Chemistry, Physics, or Mathematics. Any student who anticipates attending graduate school in chemistry or physics should also take additional courses in those disciplines.
- Interested students should discuss plans with the chairperson of the Department of Chemistry or Physics.
- The S/NC grading option may not be used for courses required for this major.
- All courses and associated labs must be completed with a C- or better.