Bachelor of Science (BS) Degree with a Major in Chemical Physics

Program Learning Outcomes for the BS Degree with a Major in Chemical Physics

Upon completing the BS degree with a major in Chemical Physics, students will be able to:

1. Acquire and demonstrate a solid foundation of knowledge in chemical physics and deeper knowledge of subdivisions of the field related to their interests.
2. Develop the ability to identify, formulate, and solve challenging scientific and technical problems as encountered in chemical physics.
3. Learn to read scientific literature and communicate scientific results orally and in writing for scientists and the general public.

Requirements for the BS Degree with a Major in Chemical Physics

For general university requirements, see Graduation Requirements (ga.rice.edu/undergraduate-students/academic-policies-procedures/graduation-requirements). Students pursuing the BS degree with a major in Chemical Physics must complete:

- A minimum of 73 credit hours to satisfy major requirements.
- A minimum of 133 credit hours to satisfy degree requirements.
- A minimum of 60 credit hours outside of major requirements.
- A minimum of 33-35 credit hours, depending on course selection, taken at the 300-level or above.

The Chemical Physics major is offered jointly by the Department of Chemistry and the Department of Physics and Astronomy. Students take upper-level courses in both chemistry and physics, focusing on the applications of physics to chemical systems. Students may obtain credit for some courses by advanced placement, and the program’s undergraduate committee can modify requirements to meet the needs of students with special backgrounds.

The courses listed below satisfy the requirements for this major. In certain instances, courses not on this official list may be substituted upon approval of the major’s academic advisor (or official certifier). Students and their academic advisors should identify and clearly document the courses to be taken.

Summary

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CHEM 491  RESEARCH FOR UNDERGRADUATES  

or PHYS 461 INDEPENDENT RESEARCH

or PHYS 462 INDEPENDENT RESEARCH

PHYS 332  JUNIOR PHYSICS LAB II

Advanced Coursework in Mathematics (MATH) or
Computational and Applied Math (CAAM)
Select 2 courses from MATH or CAAM course offerings at the
300-level or above.

Total Credit Hours Required for the Major in Chemical Physics  73

University Graduation Requirements (ga.rice.edu/
undergraduate-students/academic-policies-procedures/
graduation-requirements)  60

Total Credit Hours  133

Footnotes and Additional Information
* Includes coursework completed as distribution credit, FWIS, LPAR,
upper-level, residency (hours taken at Rice), 60 hours outside of
the major (if applicable), and any additional academic program
requirements. The "hours outside of the major" requirement may
include all of the above university requirements.
1 The CHEM 151 and CHEM 153 and CHEM 152 and CHEM 154
Honors sequence is an acceptable substitute for the CHEM 121
and CHEM 123 and CHEM 122 and CHEM 124 General Chemistry
sequence.
2 A limit of 2 credit hours from CHEM 491 or PHYS 461 or PHYS 462
may count toward the Advanced Laboratories requirement.

Policies for the BS Degree with a Major in Chemical Physics

Transfer Credit
For Rice University's policy regarding transfer credit, see Transfer Credit
(ga.rice.edu/undergraduate-students/academic-policies-procedures/
transfer-credit). Some departments and programs have additional
restrictions on transfer credit. The Office of Academic Advising
maintains the university's official list of transfer credit advisors on their
website: http://oaa.rice.edu. Students are encouraged to meet with their
academic program's transfer credit advisor when considering transfer
credit possibilities.

Program Transfer Credit Guidelines
Students pursuing the major in Chemical Physics should be aware of the
following program-specific transfer credit guidelines:

• Requests for transfer credit will be considered by the program
director (and/or the program's official transfer credit advisor) on an
individual case-by-case basis.

For additional information, please see the following department websites:

• Chemistry: http://chemistry.rice.edu/
• Physics and Astronomy: http://www.physics.rice.edu

Opportunities for the BS Degree with a Major in Chemical Physics

Academic Honors
The university recognizes academic excellence achieved over an
undergraduate's academic history at Rice. For information on university
honors, please see Latin Honors (ga.rice.edu/undergraduate-students/}

honors-distinctions/university) (summa cum laude, magna cum laude, and
cum laude) and Distinction in Research and Creative Work (ga.rice.edu/
undergraduate-students/honors-distinctions/university). Some
departments have department-specific Honors awards or designations.

For additional information, please see the following department websites:

• Chemistry: http://chemistry.rice.edu/
• Physics and Astronomy: http://www.physics.rice.edu