CHEMISTRY & BIOCHEMISTRY

Leadership

- James V Cizdziel (http://www.olemiss.edu/people/cizdziel) - Chair and Professor of Chemistry and Biochemistry

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Overview

The Department of Chemistry and Biochemistry offers a Bachelor of Arts (B.A.) in biochemistry, B.A. in chemistry, Bachelor of Science (B.S.) in chemistry with an optional emphasis in biochemistry, B.S. in forensic chemistry, and a minor in chemistry. At the graduate level, the department offers a Master of Science (M.S.) in chemistry, Doctor of Arts (D.A.) in chemistry, and Doctor of Philosophy (Ph.D.) in chemistry.

Accreditation

The B.S. in chemistry program is certified by the American Chemical Society. The B.S. in forensic chemistry is accredited by the Forensic Science Education Programs Accreditation Commission. The B.A. in biochemistry follows the guidelines of the American Society of Biochemistry and Molecular Biology.

Academics & Admissions

Undergraduate Studies

All of the undergraduate majors in the department require CHEM 1050 General Chemistry I, CHEM 1060 General Chemistry II, CHEM 1051 General Chemistry Laboratory I, and CHEM 1061 General Chemistry Laboratory II. The prerequisite for CHEM 1050 General Chemistry I is a minimum ACT mathematics score of 25 (SAT 580), 24 (SAT 560 or SATR 580 or ALEKS PPL 76), or B minimum in CHEM 1010, or B minimum in MATH 1210 College Algebra or MATH 1230 Trigonometry, or B minimum in MATH 1250 Basic Mathematics for Science & Eng or higher. See the degree requirements under Programs.

Graduate Studies

To receive full consideration for admission, applicants should submit:

1. Statement of purpose
2. Official transcripts
3. Letters of recommendation and accompanying evaluations
4. Demonstrable evidence that they meet or exceed current Graduate School English proficiency requirements.

For admission to full standing in the M.S. program or the Ph.D. program, the above materials should reflect that applicants have completed a baccalaureate degree in chemistry or a closely related subject. All applicants should have completed the following undergraduate core requirements:

- Analytical chemistry: quantitative analytical chemistry and instrumental analysis
- Biochemistry: one semester
- Inorganic chemistry: one-semester course plus lab
- Organic chemistry: two semesters with lab
- Calculus-based physical chemistry: two-semester, junior-level course

Chemistry is a multidisciplinary science, and some applicants with undergraduate degrees in closely related areas may wish to pursue an advanced degree in chemistry. Applicants who have not completed the above core requirements may still be admitted on a case-by-case basis and will be required to remedy all deficiencies. If an applicant has not completed two semesters of organic chemistry, two semesters of physics, and two semesters of calculus, they will be asked to complete these courses and then reapply.

Preliminary Examinations: All entering graduate students are required to take five orientation examinations in the discipline areas of analytical, inorganic, organic, and physical chemistry as well as biochemistry. These exams are ACS standardized exams or equivalent and test the student's mastery of these subject areas at the undergraduate level. The results of these examinations are used to place students in the appropriate courses for their first semester of enrollment. Students who score low on a particular exam will be judged to be deficient in that area and will be required to take the appropriate remedial or intermediate courses before taking any additional coursework from that area.

Applicants for the D.A. program are expected to have received a master's degree (M.S.) in Chemistry. However, students with only an undergraduate degree in chemistry may enroll in the program provided they remedy any course deficiencies and complete two semesters (6 hours) of laboratory or theoretical thesis research (CHEM 6997A Thesis). The results of this research must be presented to the department in the form of a written report and a seminar presentation. If the doctoral thesis is based on the same project, it must be a substantial extension of the initial work presented in this report.

See the degree requirements under Programs.

Faculty in Chemistry & Biochemistry

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