Emphasis - Biochemistry

- B.S. in Chemistry
- Emphasis - Biochemistry
- Degree Requirements

B.S. in Chemistry

Description

The B.S. in chemistry provides a rigorous foundation in the principal areas of basic chemistry. This program is designed for students who intend to pursue advanced studies leading to the M.S. or Ph.D. degrees in the chemical or biochemical sciences, or who wish to obtain employment as entry-level professional chemists in industrial or government laboratories. Students who intend to seek admission to combined M.D.-Ph.D. programs are advised to consider this degree program.

To enroll in the B.S. in chemistry, students must have successfully completed Chem 105 or be eligible to register for Chem 105, which requires a score of 25 on the mathematics portion of the ACT or a 580 on the mathematics portion of the SAT.

Minimum Total Credit Hours: 120

General Education Requirements

See the 'General Education/Core Curriculum' for the College of Liberal Arts.

Course Requirements

A major in chemistry for the B.S. degree consists of the following 50 hours of chemistry courses: Chem 105, 106, 115, 116; 221, 222, 225, 226; 314; 331, 332, 337; 401, 402; 423, 469, 471, two semesters of 463 (2 hours each), and two advanced courses chosen from 473, 512, 514, 519, 527, 528, 529, 530, 531, 532, 534, 536, 544, or 563. Students must complete Math 261, 262, 263, 264, and either 353 or 319 as well as Phys 211, 212, 221, 222 are also required. Students seeking the B.S. degree in chemistry who have already completed Phys 213/214 instead of Phys 211/212 must complete Phys 303.

The following courses may not be used for major credit: Chem 101, 103, 104, 113, 114, 121, 201, 202, 271, 381, 382, or 383.

Emphasis - Biochemistry

Description

The B.S. in chemistry provides a rigorous foundation in the principal areas of basic chemistry. This program is designed for students who intend to pursue advanced studies leading to the M.S. or Ph.D. degrees in the chemical or biochemical sciences, or who wish to obtain employment as entry-level professional chemists in industrial or government laboratories. Students who intend to seek admission to combined M.D.-Ph.D. programs are advised to consider this degree program, particularly the biochemistry emphasis.

To enroll in the B.S. in chemistry, students must have successfully completed Chem 105 or be eligible to register for Chem 105, which requires a score of 25 on the mathematics portion of the ACT or a 580 on the ma

Course Requirements

A major in chemistry for the B.S. degree with an emphasis in biochemistry consists of the following 47-50 hours of chemistry courses: Chem 105, 106, 115, 116; 221, 222, 225, 226; 314; 331, 332, 337; 401, 402; 469, 471, 472, 473, two semesters of 463 (2 hours each), and one advanced course chosen from Chem 580, 581 or Bisc 333, 336. Math 261, 262, 263, 264, and either 353 or 319 as well as Phys 211, 212, 221, 222 are also required.

Other Academic Requirements

To enroll in the B.S. in chemistry, students must have successfully completed Chem 105 or be eligible to register for Chem 105, which requires a score of 25 on the mathematics portion of the ACT or a 580 on the mathematics portion of the SAT.

Degree Requirements

The academic regulations for this degree program, as entered in the University of Mississippi Catalog, are in effect for the current or selected academic year and semester. The University of Mississippi reserves the right to 1) change or withdraw courses; 2) change rules for registration, instruction, and graduation; and 3) change other regulations affecting the student body at any time.

B.S. in Chemistry

General Education

REQUIREMENT	HOURS	DESCRIPTION
First Year Writing I	3	Complete Hon 101, Writ 100 or Writ 101 with a passing grade.
First Year Writing II	3	Complete one of the following courses with a passing grade: Liba 102, Writ 102 or Hon 102.
3 hrs fine arts	3	Complete 3 hours in the area of fine or performing arts. Choose from art history, music, dance, and theatre arts. Studio and workshop courses cannot be used to satisfy this requirement. Acceptable freshman or sophommore-level courses are: AH 101, AH 102, AH 201, AH 202; Music 101, Music 102, Music 103, Music 104, Music 105; Dance 200; Theatre 201 and 202
6 hrs literature survey	6	Complete 6 hours of literature survey with a passing grade. Choose from the following courses: Eng 220, 221, 222, 223, 224, 225, or Eng 226.
6 hrs modern/ancient language 200+	6	Successfully complete at least 6 hours at the 200 level or above in one modern or ancient language.
6 hrs social science	6	Successfully complete 6 semester hours in anthropology, economics, political science, psychology, or sociology.

The University of Mississippi is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award certificates and baccalaureate, master's, specialist, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or visit online at www.sacscoc.org for questions about the accreditation.

REQUIREMENT	HOURS	DESCRIPTION
6 hrs social science/humanities	6	Complete 6 hours of additional social science or humanities coursework. The courses may be chosen from African American studies, anthropology, classical civilization, economics, gender studies, history, Liba 202, philosophy, political science, psychology, religious studies, Rhet 201,sociology, and Southern studies.
6 hrs science	6	Successfully complete 2 courses of laboratory science.
2 science labs	8	Successfully complete at least two science laboratory courses.

General Education II

REQUIREMENT	HOURS	DESCRIPTION
Related subjects residence	6	Students must complete at least 6 of the required 18 hours of related subject course work in residence.
Related subjects residence GPA		Student must acheive a GPA of 2.00 in resident hours in related subjects.
Related subjects	18	Complete at least 18 credit hours in the following areas: math or physics.
Related subject GPA		Student must achieve a GPA of 2.00 overall in the related subjects.

Major Requirements

REQUIREMENT	HOURS	DESCRIPTION
Chem 105 and 115	3	Chem 105: General Chemistry I
Chem 106 and 116	3	Chem 106: General Chemistry II
Chem 105 and 115	1	Chem 115: General Chemistry Laboratory I
Chem 106 and 116	1	Chem 116: General Chemistry Laboratory II
Chem 221 and 225	4	Chem 221: Elementary Organic Chemistry I, Chem 225: Elementary Organic Chem. Laboratory I
Chem 222 and 226	4	Chem 222: Elementary Organic Chemistry II, Chem 226: Elementary Organic Chem. Laboratory II
Chem 314	4	Chem 314: Quantitative Analysis
Chem 331 and 337	3	Chem 331: Physical Chemistry I
Chem 332	3	Chem 332: Physical Chemistry II
Chem 331 and 337	1	Chem 337: Physical Chemistry Laboratory I
Chem 401 and 402	4	Chem 401: Inorganic Chemistry, Chem 402: Inorganic Chemistry Laboratory
Chem 463 (two semesters)	4	Chem 463: Senior Research and Discovery
Chem 469	4	Chem 469: Introduction to Instrumental Analysis
Chem 471	3	Chem 471: Biochemistry I
Enroll in an emphasis		Enroll in either the standard option or the optional biochemistry emphasis.
Chemistry residency hrs	18	Students must earn at least 18 hours of their major courses in residence. The following courses may not be used for major or minor credit: Chem 101, Chem 102, Chem 103, Chem 104, Chem 113, Chem 114, Chem 121, Chem 201, Chem 202,Chem 271, Chem 381, Chem 382, or Chem 383.
Overall Major GPA		Please contact your academic advisor for grade point requirements.
Resident Major GPA		Please contact your academic advisor for grade point requirements.

Major Requirements II

REQUIREMENT	HOURS	DESCRIPTION
Math 261	3	Complete Math 261 with a passing grade.
Math 262	3	Complete Math 262 with a passing grade.
Math 263	3	Complete Math 263 with a passing grade.
Math 264	3	Complete Math 264 with a passing grade.
Math 353, 319, or 375	3	Complete Math 353, Math 319, or Math 375.
Phys 211	3	Complete Phys 211 with a passing grade.
Phys 212	3	Complete Phys 212 with a passing grade.

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REQUIREMENT	HOURS	DESCRIPTION
Phys 221	1	Complete Phys 221 with a passing grade.
Phys 222	1	Complete Phys 222 with a passing grade.

Emphasis - Biochemistry

REQUIREMENT	HOURS	DESCRIPTION
Chem 472	1	Complete Chem 472 with a passing grade.
Chem 473	3	Complete Chem 473 with a passing grade.
1 advanced course	3	Complete an advanced chemistry course chosen from the following: Chem 580, 581, Bisc 333, 336.

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