



Mississippi College
A CHRISTIAN UNIVERSITY

Department of Chemistry and Biochemistry

B.S. Chemistry Degree Requirements

DEGREE: ACS CHEMISTRY



ACS
Chemistry for Life®

Chemistry Core Requirements	Completed	Credit	College Core Requirements	Completed	Credit
Chemistry Core (27 semester hours)			English Composition (6 semester hours)		
CHE 141 General Chemistry I	_____	4	ENG 101	_____	3
CHE 142 General Chemistry II	_____	4	ENG 102	_____	3
CHE 303 Organic Chemistry I	_____	3	Literature (6 semester hours - choose two)		
CHE 313 Organic Chemistry I Lab	_____	2	ENG 211/212/213	_____	3
CHE 304 Organic Chemistry II	_____	3		_____	3
CHE 314 Organic Chemistry II Lab	_____	2	History (6 semester hours - choose one pair)		
CHE 310 Quantitative Chemical Analysis	_____	4	HIS 101 and 102/HIS 103 and	_____	3
CHE 317 Chemical Dynamics	_____	4	104/HIS 211 and 212	_____	3
CHE 431 Chemistry Seminar	_____	1	Bible (6 semester hours)		
Physics (8 semester hours) #			BIB 110	_____	3
PHY 251 Fund. of Physics I	_____	4	BIB 120	_____	3
PHY 252 Fund. of Physics II	_____	4	Social Sciences (6 semester hours - choose two)		
Mathematics (6 semester hours)			ECO 131 (or 231)/*SOC 205/	_____	3
MAT 121 Cal. w/Analytic Geometry I	_____	3	PLS 201/*PSY 201/PHI/MLG 205	_____	3
MAT 122 Cal. w/Analytic Geometry II	_____	3	Fine Arts (3 semester hours - choose one)		
Technology (3 semester hours - choose one)			ART 125/MUS 125/THE 125	_____	3
CSC 114 Introduction to Computer Science	_____	3	Physical Education Activity (3 semester hours)		
CSC 115 Foundations of CS (preferred)	_____		PED	_____	1
Communications (3 semester hours)			PED	_____	1
COM 203 Professional Com. Skills	_____	3	PED	_____	1
COM 304 Public Speaking or participation in a minimum of three hours of research w/an oral presentation at a professional meeting.	_____		Writing Proficiency Exam		
			ENG 099	_____	0
			Chapel (4 semesters)		
			Chapel I	_____	0
			Chapel II	_____	0
			Chapel III	_____	0
			Chapel IV	_____	0
			Science - Contained in major		
			Mathematics - Contained in major		
			Modern Languages - Not required		
			Technology - Contained in major		
			Electives:		
			_____	_____	
			_____	_____	
			_____	_____	
			_____	_____	
			_____	_____	

DEGREE: CHEMISTRY/ACS

Chemistry (12 semester hours)		
CHE 211 Invest. In Inorganic Chem.	_____	1
CHE 318 Chemical Energetics	_____	4
CHE 410 Instrumental Analysis	_____	4
CHE 411 Advanced Inorganic Chem.	_____	3
(3 semester hours - choose one)		
CHE 418 Biochem. I: Macromolecules	_____	3
CHE 419 Biochem. II: Metabolism	_____	
(3 or 4 semester hours - choose one)		
CHE 402 Advanced Organic Chemistry	_____	4
CHE 417 Theoretical Chemistry	_____	3
CHE 451 Independent Study/Research	_____	3
or Completion of the Honors sequence: (6 semester hours)		
CHE 361 Honors I	_____	1
CHE 462 Honors II	_____	2
CHE 463 Honors III	_____	3
Mathematics (6 semester hours - choose two)		
MAT 213 Intro.to Linear Algebra	_____	3
MAT 221 Cal. w/Analytic Geometry III	_____	3
MAT 222 Cal. w/Analytic Geometry IV	_____	
MAT 352 Intro. to Differential Equations	_____	
MAT 353 Intro. to Math. Probability and Statistics	_____	

Notes:

PHY 151 - 152 may substitute

* PSY 201 and SOC 205 recommended for Medical School

**Students planning to continue their education in a professional school should consult those schools for specific admission requirements.

***Qualified Students are encourage to participate in an independent research project or the Honors Program (see advisor for details)

To Graduate:

130 Hours

39 Hours of 300-400 level courses

45 - 46 Hours of Chemistry

For More Information:

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Major: ACS Chemistry

<u>FIRST YEAR - FALL</u>	<u>HRS</u>
CHE 141 ^{F, S1} General Chemistry I with lab	4
MAT 121 Calculus w/ Analytical Geometry I	3
ENG 101 English Composition	3
Core	3
General Elective or Core	4
Chapel (Freshman Experience)	<u>0</u>
	17

<u>SECOND YEAR - FALL</u>	
CHE 303 ^{F, S1} Organic Chemistry I	3
CHE 313 ^{F, S1} Organic Chemistry II lab	2
CHE 310 ^{F, Sp} Quantitative Chem. Analysis	4
CSC 115 ^{F, Sp} Technology Core	3
Math Course (See Below)	3
Core	1
Chapel	<u>0</u>
	16

<u>THIRD YEAR - FALL</u>	
CHE 317 ^F Chemical Dynamics	4
PHY 252 ^F Fundamentals of Physics II	4
Core	<u>7</u>
	15

<u>FOURTH YEAR - FALL</u>	
CHE 418 ^{F, S1} Biochemistry I: Metabolism	3
CHE 420 ^F Biochemistry I Laboratory	1
Advanced Chemistry Course	4
Chemistry Course or General Elective	2
Core	<u>6</u>
	16

<u>Advanced Chemistry Course</u>	
CHE 402 ^F Advance Organic Chemistry	4
CHE 417 ^{Sp} Theoretical Chemistry (Odd yrs.)	3
CHE 451 OR 452 ^{F, Sp, S1, S2} Ind. Studies and Research	3,3
CHE 361, 462, 463 ^{F, Sp, S1, S2} Honors Sequence	1,2,3

<u>Additional Chemistry Courses</u>	
CHE 415 Synthetic Inorganic Chemistry	
CHE 419 ^{Sp, S2} Biochemistry II: Metabolism	
CHE 421 ^{Sp} Biochemistry II Laboratory	

<u>FIRST YEAR - SPRING</u>	<u>HRS.</u>
CHE 142 ^{Sp, S2} General Chemistry II with lab	4
MAT 122 Calculus w/ Analytical Geometry II	3
ENG 102 or 103 English Composition II	3
Core	3
General Elective or Core	4
Chapel	<u>0</u>
	17

<u>SECOND YEAR - SPRING</u>	
CHE 304 ^{Sp, S2} Organic Chemistry II	3
CHE 314 ^{Sp, S2} Organic Chemistry II lab	2
PHY 251 ^{Sp} Fundamentals of Physics II	4
CHE 211 ^{Sp} Invest. of Inorganic Chemistry	1
Math Course (See Below)	3
Communication Requirement (COM 203 or 304)	3
Chapel	<u>0</u>
	16

<u>THIRD YEAR - SPRING</u>	
CHE 318 ^{Sp} Chemical Energetics	4
CHE 410 ^{Sp} Instrumental Analysis	4
Core	6
Chemistry Course or General Electives	<u>3</u>
	17

<u>FOURTH YEAR - SPRING</u>	
CHE 411 ^{Sp} Advance Inorganic Chemistry	3
CHE 431 ^{Sp} Chemical Seminar	1
Core	4
Chemistry Course or General Elective	<u>8</u>
	16

<u>Math Courses</u>	
MAT 221 ^F Calculus with Analytical Geometry III	3
MAT 353 ^F Intro. to Math Probability and Stat.	3
MAT 213 ^{Sp} Intro. To Linear Algebra (Odd yrs.)	3
MAT 222 ^{Sp} Calculus w/ Analytical Geometry IV	3

Key

F= Fall Semester

Sp = Spring Semester

S1 = First 5 week summer term

S2 = Second week summer term