MISSISSIPPI COLLEGE
A CHRISTIAN UNIVERSITY

Department of Chemistry and Biochemistry

B.S. Chemistry Degree Requirements

DEGREE: CHEMICAL PHYSICS

Chemistry Core Requirements	*Completed*	*Credit*
Chemistry Core (27 semester hours)		
CHE 141 General Chemistry I	_____	4
CHE 142 General Chemistry II	_____	4
CHE 303 Organic Chemistry I	_____	3
CHE 313 Organic Chemistry I Lab	_____	2
CHE 304 Organic Chemistry II	_____	3
CHE 314 Organic Chemistry II Lab	_____	2
CHE 310 Quantitative Chemical Analysis	_____	4
CHE 317 Chemical Dynamics	_____	4
Physics (Eight semester hours)	_____	
PHY 251 Fund. of Physics I (preferred)	_____	4
PHY 252 Fund. of Physics II (preferred)	_____	4
PHY 151 General Physics I		
PHY 152 General Physics II		
Mathematics (Six semester hours)		
MAT 121 Cal. w/Analytic Geometry I	_____	3
MAT 122 Cal. w/Analytic Geometry II	_____	3
Technology (Three semester hours - choose one)		
CSC 115 Foundations of CS (preferred)	_____	3
CSC 114 Introduction to Computer Science		
Communications (Three semester hours)		
COM 203 Professional Com. Skills	_____	3
COM 304 Public Speaking or participation in a minimum of three hours of research w/an oral presentation at a professional meeting.		

DEGREE: CHEMICAL PHYSICS		
Chemistry (15 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
CHE 417 Theoretical Chemistry	_____	3
(Three semester hours - choose one)		
CHE 418 Biochem. I: Macromolecules	_____	3
CHE 419 Biochem. II: Metabolism		
Advanced Mathematics (Six 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		
Physics (three semester hours)		
PHY 301 Modern Physics	_____	3
Advanced Physics or Mathematics		
(Three semester hours) - choose one		
PHY 401 Quantum Physics	_____	3
MAT 352 Intro. to Differential Equations		
MAT 381 Intro. to Numerical Methods		
CHE 451 Chemical Physics Research		
Biology (3 semester hours)		
BIO 111 Biology I	_____	3

Notes:

PHY 151 - 152 may substitute

PSY 201 and SOC 205 recommended for Medical School

MAT 207 Statistics is required for UMMC Dental 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)**

College Core Requirements	*Completed*	*Credit*
English Composition (6 semester hours)		
ENG 101 and 102 or ENG 103	_____	3
	_____	3
Literature (3 semester hours - choose one)		
ENG 211/212/213	_____	3
History (6 semester hours - choose one pair)		
HIS 103 and 104	_____	3
HIS 211 and 212	_____	3
Bible (6 semester hours)		
BIB 110	_____	3
BIB 120	_____	3
Social Sciences (3 semester hours - choose one)		
ECO 231/*SOC 205/PLS 201/*PSY 201/ MLG 205/GBU 151	_____	3
Fine Arts (3 semester hours - choose one)		
ART 125/MUS 125/THE 125	_____	3
Physical Education Activity (2 semester hours)		
KIN 123 or two (1-hour) PED activity course	_____	1
	_____	1
Writing Proficiency Exam		
ENG 099	_____	0
Chapel (4 semesters)		
Freshmen 4 semesters	_____	0
Sophomore 3 semesters	_____	0
Junior 2 semesters	_____	0
Senior 1 semester	_____	0
Science - Contained in major		
Mathematics - Contained in major		
Modern Languages - Not required		
Technology - Contained in major		
Electives:		
_____		_____
_____		_____
_____		_____
_____		_____
_____		_____

To Graduate:

130 Hours

39 Hours of 300-400 level courses _____

45 - 46 Hours of Chemistry _____

For More Information:

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Mississippi College

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Major: Chemical Physics

FIRST YEAR - FALL	HRS
CHE 141 [F, S1] General Chemistry I with lab	4
MAT 121 Calculus w/ Analytical Geometry I	3
ENG 101 English Compostion	3
BIO 111[F] Biology I	3
General Elective or Core	4
Chapel (Freshman Experience)	0
	17

FIRST YEAR - SPRING	HRS.
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	0
	17

SECOND YEAR - FALL	
CHE 303 [F, S1] Organic Chemistry I	3
CHE 313 [F, S1] Organic Chemistry II lab	2
CHE 310 [F, Sp] Quantatative Chem. Analysis	4
CSC 115 Technology Core	3
Advanced Math Course (See Below)	3
Core	1
Chapel	0
	16

SECOND YEAR - SPRING	
CHE 304 [Sp, S2] Organic Chemistry II	3
CHE 314 [Sp, S2] Organic Chemsitry II lab	2
PHY 251 [Sp] Fundamentals of Physics II	4
CHE 211 [Sp] Invest.of Inorganic Chemistry	1
Advanced Math Course (See Below)	3
Communication Requirement (COM 203 or 304)	3
Chapel	0
	16

THIRD YEAR - FALL	
CHE 317 [F] Chemical Dynamics	4
PHY 252 [F] Fundamentals of Physics II	4
Core	7
	15

THIRD YEAR - SPRING	
CHE 318 [Sp] Chemical Energetics	4
CHE 410 [Sp] Instrumental Analysis	4
Core	6
Chemistry Course or General Electives	3
	17

FOURTH YEAR - FALL	
CHE 418 Biochem. I: Macromolecules	3
Advanced Chemistry Course	4
PHY 301 Modern Physics	3
Core	6
	17

FOURTH YEAR - SPRING	
CHE 411 [Sp] Advanced Inorganic Chemistry	3
CHE 431 [Sp] Chemical Seminar	1
Core	4
CHE 417 [Sp] Theoretical Chemistry (Odd yrs.)	3
Advanced Physics or Mathematics Course	3
	15

Additional Chemistry Course

CHE 402 [F] Advanced Organic Chemistry	4
CHE 415 Synthetic Inorganic Chemistry	3
CHE 419 [Sp, S2] Biochemistry II: Metabolism	3
CHE 420[F] Biochemistry I: Laboratory	1
CHE 421 [Sp] Biochemistry II Laboratory	1
CHE 361, 462, 463 [F, Sp, S1, S2] Honors Sequence	1,2,3

Math Courses

MAT 213 [Sp] Intro. To Linear Algebra (Odd yrs.)	3
MAT 221 [F] Calculus with Analytical Geometry III	3
MAT 222 [Sp] Calculus w/ Analytical Geometry IV	3
MAT 353 [F] Intro. to Math Probablility and Stat.	3

Advanced Physics or Mathmatics Courses

PHY 401 Quantum Physics	3
MAT 352 Intro. to Differential Equations	3
MAT 381 Intro. to Numerical Methods	3
CHE 451 Chemical Physics Research	3

Key

F = Fall Semester
Sp = Spring Semester
S1 = First 5 week summer term
S2 = Second week summer term

04.12.24