



DEGREE: CHEMICAL PHYSICS

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
Physics (Eight semester hours)				Bible (6 semester hours)			
PHY 251 Fund. of Physics I (preferred)	_____		4	BIB 110	_____		3
PHY 252 Fund. of Physics II (preferred)	_____		4	BIB 120	_____		3
PHY 151 General Physics I	_____			Social Sciences (6 semester hours - choose two)			
PHY 152 General Physics II	_____			ECO 131 (or 231)/*SOC 205/	_____		3
Mathematics (Six semester hours)				PLS 201/*PSY 201/PHI/MLG 205			
MAT 121 Cal. w/Analytic Geometry I	_____		3	Fine Arts (3 semester hours - choose one)			
MAT 122 Cal. w/Analytic Geometry II	_____		3	ART 125/MUS 125/THE 125	_____		3
Technology (Three semester hours - choose one)				Physical Education Activity (3 semester hours)			
CSC 115 Foundations of CS (preferred)	_____		3	PED	_____		1
CSC 114 Introduction to Computer Science	_____			PED	_____		1
Communications (Three semester hours)				Writing Proficiency Exam			
COM 203 Professional Com. Skills	_____		3	ENG 099	_____		0
COM 304 Public Speaking or participation in a minimum of three hours of research w/an oral presentation at a professional meeting.	_____			Chapel (4 semesters)			
DEGREE: CHEMICAL PHYSICS				Chapel I			
Chemistry (15 semester hours)				Chapel II			
CHE 211 Invest. In Inorganic Chem.	_____		1	Chapel III			
CHE 318 Chemical Energetics	_____		4	Chapel IV			
CHE 410 Instrumental Analysis	_____		4	Science - Contained in major			
CHE 411 Advanced Inorganic Chem.	_____		3	Mathematics - Contained in major			
CHE 417 Theoretical Chemistry	_____		3	Modern Languages - Not required			
(Three semester hours - choose one)				Technology - Contained in major			
CHE 418 Biochem. I: Macromolecules	_____		3	Electives:			
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	_____			To Graduate:			
Physic (three semester hours)				130 Hours			
PHY 301 Modern Physics	_____		3	39 Hours of 300-400 level courses			
Advanced Phycis or Mathmatics (Three semester hours) - choose one				45 - 46 Hours of Chemistry			
PHY 401 Quantam Physics	_____		3	For More Information:			
MAT 352 Intro. to Differential Equations	_____			J. Clinton Bailey, II, Chair			
MAT 381 Intro. to Numerical Methods	_____			Mississippi College			
CHE 451 Chemical Physics Research	_____			P.O. Box 4036, Clinton, MS 39056			
Notes:				Email: bailey@mc.edu			
# PHY 151 - 152 may substitute							
## PSY 201 and SOC 205 recommended for Medical School							
### MAT 207 Statics 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)							

Major: Chemical Physics

<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>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 - FALL</u>	
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	<u>0</u>
	16

<u>SECOND YEAR - SPRING</u>	
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	<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>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 - FALL</u>	
CHE 418 Biochem. I: Macromolecules	3
Advanced Chemistry Course	4
PHY 301 Modern Physics	3
Core	<u>6</u>
	17

<u>FOURTH YEAR - SPRING</u>	
CHE 411 ^{Sp} Advance Inorganic Chemistry	3
CHE 431 ^{Sp} Chemical Seminar	1
Core	4
CHE 417 ^{Sp} Theoretical Chemistry (Odd yrs.)	3
Advance Physics or Mathematics Course	3
	15

Additional Chemistry Course

CHE 402 ^F Advance 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 Quantam 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