



DEGREE: CHEMICAL PHYSICS

<i>Chemistry Core Requirements</i>	<i>Completed</i>	<i>Credit</i>	<i>College Core Requirements</i>	<i>Completed</i>	<i>Credit</i>
<b>Chemistry Core (27 semester hours)</b>			<b>English Composition (6 semester hours)</b>		
CHE 141 General Chemistry I	_____	4	ENG 101 and 102 or ENG 103	_____	3
CHE 142 General Chemistry II	_____	4		_____	3
CHE 303 Organic Chemistry I	_____	3	<b>Literature (3 semester hours - choose one)</b>		
CHE 313 Organic Chemistry I Lab	_____	2	ENG 211/212/213	_____	3
CHE 304 Organic Chemistry II	_____	3			
CHE 314 Organic Chemistry II Lab	_____	2	<b>History (6 semester hours - choose one pair)</b>		
CHE 310 Quantitative Chemical Analysis	_____	4	HIS 103 and 104	_____	3
CHE 317 Chemical Dynamics	_____	4	HIS 211 and 212	_____	3
			<b>Bible (6 semester hours)</b>		
<b>Physics (Eight semester hours)</b>			BIB 110	_____	3
PHY 251 Fund. of Physics I (preferred)	_____	4	BIB 120	_____	3
PHY 252 Fund. of Physics II (preferred)	_____	4	<b>Social Sciences (3 semester hours - choose one)</b>		
PHY 151 General Physics I			ECO 231/*SOC 205/PLS 201/*PSY 201/	_____	3
PHY 152 General Physics II			MLG 205/GBU 151		
<b>Mathematics (Six semester hours)</b>			<b>Fine Arts (3 semester hours - choose one)</b>		
MAT 121 Cal. w/Analytic Geometry I	_____	3	ART 125/MUS 125/THE 125	_____	3
MAT 122 Cal. w/Analytic Geometry II	_____	3	<b>Physical Education Activity (2 semester hours)</b>		
<b>Technology (Three semester hours - choose one)</b>			KIN 123 or two (1-hour) PED activity course	_____	1
CSC 115 Foundations of CS (preferred)	_____	3		_____	1
CSC 114 Introduction to Computer Science					
<b>Communications (Three semester hours)</b>			<b>Writing Proficiency Exam</b>		
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.			<b>Chapel (4 semesters)</b>		
			Freshmen 4 semesters	_____	0
			Sophomore 3 semesters	_____	0
			Junior 2 semesters	_____	0
			Senior 1 semester	_____	0
			<b>Science - Contained in major</b>		
			<b>Mathematics - Contained in major</b>		
			<b>Modern Languages - Not required</b>		
			<b>Technology - Contained in major</b>		
			<b>Electives:</b>		
			_____	_____	_____
			_____	_____	_____
			_____	_____	_____
			_____	_____	_____
			_____	_____	_____
			_____	_____	_____
<b>DEGREE: CHEMICAL PHYSICS</b>					
<b>Chemistry (15 semester hours)</b>			<b>To Graduate:</b>		
CHE 211 Invest. In Inorganic Chem.	_____	1	130 Hours	_____	
CHE 318 Chemical Energetics	_____	4	39 Hours of 300-400 level courses	_____	
CHE 410 Instrumental Analysis	_____	4	45 - 46 Hours of Chemistry	_____	
CHE 411 Advanced Inorganic Chem.	_____	3			
CHE 417 Theoretical Chemistry	_____	3			
<b>(Three semester hours - choose one)</b>					
CHE 418 Biochem. I: Macromolecules	_____	3			
CHE 419 Biochem. II: Metabolism	_____				
<b>Advanced Mathematics (Six semester hours - choose two)</b>					
MAT 213 Intro.to Linear Algebra	_____	3			
MAT 221 Cal. w/Analytic Geometry III	_____	3			
MAT 222 Cal. w/Analytic Geometry IV	_____				
<b>Physics (three semester hours)</b>					
PHY 301 Modern Physics	_____	3			
<b>Advanced Physics or Mathematics</b>					
<b>(Three semester hours) - choose one</b>					
PHY 401 Quantum Physics	_____	3			
MAT 352 Intro. to Differential Equations					
MAT 381 Intro. to Numerical Methods					
CHE 451 Chemical Physics Research					

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)

**For More Information:**  
**J. Clinton Bailey, II, Chair**  
  
 Mississippi College  
 P.O. Box 4036, Clinton, MS 39056  
 Email: bailey@mc.edu  
 Phone: 601.925.3338  
 Web: <http://www.mc.edu/academics/departments/chemistry/>

# Major: Chemical Physics

FIRST YEAR - FALL	HRS
CHE 141 <sup>F, S1</sup> 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

FIRST YEAR - SPRING	HRS.
CHE 142 <sup>Sp, S2</sup> 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

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

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

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

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

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

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

<u>Additional Chemistry Course</u>	
CHE 402 <sup>F</sup> Advanced Organic Chemistry	4
CHE 415 Synthetic Inorganic Chemistry	3
CHE 419 <sup>Sp, S2</sup> Biochemistry II: Metabolism	3
CHE 420 <sup>F</sup> Biochemistry I: Laboratory	1
CHE 421 <sup>Sp</sup> Biochemistry II Laboratory	1
CHE 361, 462, 463 <sup>F, Sp, S1, S2</sup> Honors Sequence	1,2,3

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

<u>Advanced Physics or Mathmatics Courses</u>	
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

<u>Key</u>	
F	= Fall Semester
Sp	= Spring Semester
S1	= First 5 week summer term
S2	= Second week summer term