

**DEPARTMENT OF CHEMISTRY**  
**(BS CHEMISTRY PRE-PHARM) UMES PHARM D 3+3 CURRICULUM**

Fall Semester		Spring Semester	
Course	Course Name	Course	Course Name
CHEM-101	General Chemistry I	CHEM-102	General Chemistry II
ENGL-101	English Composition I (C)	ENGL-102	English Comp. II (C)
xx-xxx	History Elective (B/AtC)	xx-xxx	Arts/Humanities Elective (B/AtC)
BIOL-101	General Biology I (B)	BIOL-102	General Biology II (B)
CHEM-191	University Seminar I (C)	CHEM-192	University Seminar II (C)
		KINE-101	Fitness and Wellness (C)
	<b>Total Credit Hours: 15</b>		<b>Total Credit Hours: 17</b>

Fall Semester		Spring Semester	
Course	Course Name	Course	Course Name
CHEM-210	Organic Chemistry I	CHEM-211	Organic Chemistry II
BIOL-215	Cell Biology	PSYC-201	Introduction to General Psychology (B)
MTSC-251	Calculus I (B)	MTSC-252	Calculus II (AtC)
SCCJ-101	Introduction to Sociology (B)	BIOL-210	Genetics
	<b>Total Credit Hours: 15</b>		<b>Total Credit Hours: 15</b>

Fall Semester		Spring Semester	
Course	Course Name	Course	Course Name
CHEM-305	Analytical Chemistry	PHYS-202	General Physics II
PHYS-201	General Physics I (B)	<i>OR</i>	
<i>OR</i>		PHYS-212	Fundamentals of Physics II
PHYS-211	Fundamentals of Physics I (B)	PHIL-202	Ethics <i>OR</i>
CHEM-403	Biochemistry	<i>OR</i>	
BIOL-3xx	Advanced Biology Elective (300 level or higher) <i>OR</i>	PHIL-322	BioEthics
<i>OR</i>		BIOL-3xx	Advanced Biology Elective (300 level or higher) <i>OR</i>
GLOB-395	Global Societies (C)	<i>OR</i>	
		GLOB-395	Global Societies (C)
CHEM-405	*Independent Study (Capstone)	ENGL-200	Speech (C)
	<b>Total Credit Hours: 18</b>		<b>Total Credit Hours: 13</b>

Fall Semester**		Spring Semester**	
Course	Course Name	Course	Course Name
PHARM-530	Pharmaceutics & Biopharmaceutics	PHARM-531	Pharmacokinetics
PHARM-510	Fund. Of Drug Action & Metabolism	PHARM-525	Medicinal Chemistry
PHARM-550	Pharmaceutical Calculations	PHARM-524	Toxicology
PHARM-571	IPPE (Intro Phar Prac Exp) I	PHARM-572	IPPE (Intro Phar Prac Exp) II
PHARM-511	Genetic Controls of Cell Func. Cell Reprod. And Protein Synthesis	PHARM-512	Metabol. Of Carbohydrates, Lipids, and Amino Acids
	<b>Total Credit Hours: 14</b>		<b>Total Credit Hours: 14</b>

\*Capstone

**Key Codes:**

(C) Core Course

(B) Breadth Course

(AtC) Across-the-Curriculum

\*\*UMES Pharmacy Classes

(S) Spring Only Course

(F) Fall Only Course

(E) Even Years

(O) Odd Years

<b>Total Credits: 121</b>
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Breadth & AtC Requirements	Course(s)
History (African American Experience/Multicultural)	
Literature (African American Experience/Multicultural)	
Social Science	PSYC 201
Arts/Humanities Elective 1 (African American Experience/Multicultural)	
Arts/Humanities Elective 2 (African American Experience/Multicultural)	
African American Experience (History/Literature/Art/Free Elective)	
Multicultural 1 (History/Literature/Social Science/Art/Free Elective)	Intro to Sociology
Multicultural 2 (History/Literature/Social Science/Art/Free Elective)	
Reading/Speaking/Listening Across-the-Curriculum	
Self-Evaluation	PSYC 201
Wellness	PSYC 201
Information Literacy	
Computer Competency	
Writing in Major	
Quantitative Reasoning	CHEM 305
Global Issues	
Critical Thinking/Problem Solving Issues	CHEM 305