CHEMISTRY - APPLIED CHEMISTRY (BACHELOR OF SCIENCE)

The concentration in Applied Chemistry is designed for students with interests in the application of chemistry in other fields, such as pharmacology, medicine, dentistry, veterinary science, forensics, education, patent or environmental law, technical writing, art conservation, sales, marketing or management in a chemical-related industry. The requirements for the Bachelor of Science degree in Applied Chemistry are:

Course	Title	Credits
Jax MIX General Education Curriculum		**41**

Course	Title	Credits
Chemistry Requirements		
CY 105 & CY 107	General Chemistry I and General Chemistry Laboratory I	4
CY 106 & CY 108	General Chemistry II and General Chemistry Laboratory II	4
CY 231	Organic Chemistry I	4
CY 232	Organic Chemistry II	4
CY 341	Physical Chemistry I (WI)	4
CY 362	Biochemistry I (WI)	4
Chemistry Concentration		
CY 321	Quantitative Analysis	4
Select a minimum of 12 hours of Chemistry electives from the following:		12
CY 363	Biochemistry II	
CY 411	Intermediate Inorganic Chemistry	
CY 413	Pharmacology	
CY 414	Medical Biochemistry	
CY 416	Forensic Chemistry	
CY 417	Macro-Molecular Modeling	
CY 418	Enzymology	
CY 419	Advanced Materials and Technology	
CY 421	Instrumental Analysis	
CY 435	Advanced Topics in Chemistry	
CY 450	Neurochemistry	
CY 490	Internship *	
CY 497	Chemistry Research *	
Support Courses		
MS 113	Precalculus Trigonometry (or higher excluding MS 204)	3
PHS 201 & PHS 203	College Physics I and College Physics Laboratory Techniques I	4
PHS 202 & PHS 204	College Physics II and College Physics Laboratory Techniques II	4
Total Hours		**51**

* This course may be repeated up to three times for a maximum of three credit hours.

In addition to courses noted below, candidates for graduation must successfully complete all JSU Academic Regulations. **More information about Jax MIX requirements (https://catalog.jsu.edu/undergraduate/jax-mix-requirements/) and Alabama Transfers equivalents (https://catalog.jsu.edu/undergraduate/alabama-transfers-equivalents/) can be found in their respective section of the catalog.**

Freshman

Fall		Hours
Jax MIX Communication: EH Composition sequence		3
CY 105 & CY 107	General Chemistry I and General Chemistry Laboratory I (Jax MIX Inquiry)	4
MS 112	Precalculus Algebra (or higher excluding MS 204 - Jax MIX Communication)	3
SSC 101	First Year Experience	0
Elective		3
	Hours	**13**

Spring		
Jax MIX Communication: EH Composition sequence		3
CY 106 & CY 108	General Chemistry II and General Chemistry Laboratory II (Jax MIX Inquiry)	4
Jax MIX Experience: Social/Behavioral Science		3
MS 113	Precalculus Trigonometry (or higher excluding MS 204)	3
Elective		3
	Hours	**16**

Sophomore

Fall		
Jax MIX Experience: History [1]		3
PHS 201 & PHS 203	College Physics I and College Physics Laboratory Techniques I	4
CY 231	Organic Chemistry I	4
Elective		3
	Hours	**14**

Spring		
Jax MIX Expression: Literature [1]		3
PHS 202 & PHS 204	College Physics II and College Physics Laboratory Techniques II	4
CY 232	Organic Chemistry II	4
Elective		4
	Hours	**15**

Junior

Fall		
Jax MIX Expression (Literature if sequence) [1]		3
CY 362	Biochemistry I (WI)	4
CY 300+ Elective		4
Elective 300+		3
	Hours	**14**

Spring		
EH 141	Speech (Jax MIX Communication)	3
Jax MIX Experience (History if sequence) [1]		3
CY 321	Quantitative Analysis	4
CY 300+ Elective		3
Electives 300+		3
	Hours	**16**

Senior

Fall		
Jax MIX Expression: Fine Arts		3
CY 341	Physical Chemistry I (WI)	4
CY 300+ Elective		3
Elective 300+		3
Elective		3
	Hours	**16**

Spring	
Jax MIX Experience: Social/Behavioral Science	3
CY 300+ Elective	3
Elective 300+	3
Elective	7
Hours	**16**
Total Hours	**120**

[1] A sequence in either literature or history is required with a minimum of three credit hours in both history and literature.