BACHELOR OF SCIENCE
CHEMISTRY

American Chemical Society Certification

Our chemistry program provides a quality education in fundamental, applied, and interdisciplinary areas of the chemical sciences. Students will have a broad education necessary to understand the contemporary issues and impact of the chemical sciences in global, economic, environmental, medicinal, and societal contexts. There are six concentrations in the areas of biomedical science, environmental science, forensic science, and pre professional programs in pre medicine, pre dentistry, and pre pharmacy. There is an American Chemical Society certification option for students interested in pursuing graduate study in chemistry and a chemistry option without a concentration to allow students to personalize their program.

College of Science, Engineering, and Technology

COURSE TYPE DESCRIPTIONS		
General Education Core	GEC	**General Education Core (GEC)** courses are courses that every student must take in order to obtain a degree from Jackson State University. GEC courses are essential to every undergraduate degree at Jackson State University. Collectively, there are 30 credit hours of GEC course requirements.
General Education Pathway	PATH	**General Education Pathway (PATH)** courses are courses that are connected through interdisciplinary themes and are selected at the student's discretion to fulfill the general education curriculum. Through experiential learning and reflective writing, students will have the opportunity to integrate knowledge across courses, develop their skills and an enhanced sense of civic responsibility. Students select nine (9) hours from the pathway of choice. Each pathway concludes with a related one (1) credit hour a University Required (UR) course.
University Required	UR	**University Required (UR)** courses are courses that are specific to Jackson State University and are designed to integrate students within the Jackson State University community by promoting student success resources, strategies and high impact practices.
Degree Program Requirement	DPR	**Degree Program Required (DPR)** courses are courses that are required for completion of a degree program within the specified major.
Electives	DPE or GEL	**Electives** are courses selected at a student's discretion and provide opportunities for students to pursue their academic interests. There are two types of electives. **Degree Program Elective (DPE)** courses are elective courses that are partially restricted such that students select courses from a specified group of identified courses (e.g., departmental elective courses) to fulfill a particular requirement. **General Elective (GEL)** courses are courses that may be selected from any program for which the student has fulfilled the proper prerequisites.
Professional Concentrations	PC	**Professional Concentration (PC)** courses complement Degree Program Required courses and allow students to have a concentrated area of study within the major.

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

CHEMISTRY

CONCENTRATION: AMERICAN CHEMICAL SOCIETY CERTIFICATION

Students majoring in Chemistry with ACSC Certification must take six (6) hours of advanced chemistry electives from the following courses:

Concentration	Course	Course Title	Credit Hours
Advanced Chemistry Electives	CHEM 410	Environmental Chemistry	3
	CHEM 432	Biochemistry II	3
	CHEM 436	Physical Organic Chemistry	3
	CHEM 438	Organic Synthesis	3
	CHEM 439	Introduction to Polymer Chemistry	3
	CHEM 451	Chemical Application of Group Theory	3
	CHEM 452	Atomic and Molecular Structure	3
	CHEM 453	Thermodynamics	3
	CHEM 458	Quantum Mechanics	3
	CHEM 471	Forensic Toxicology	3

Degree Map: Catalog 2022-2023

Student Name: _____

J-Number:_____

Advisor: _____

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

CHEMISTRY

CONCENTRATION: AMERICAN CHEMICAL SOCIETY CERTIFICATION

Entering Term: _____

Expected Graduation Date: _____

Pathway:_____

FRESHMAN YEAR FALL 1ST SEMESTER					
COURSE	**COURSE TITLE**	**CREDIT HOURS**	**COURSE TYPE**	**GRADE**	**SUCCESS MARKER/NOTE**
UNIV 100	University Success	2	UR		
ENG 104	Composition I	3	GEC		
CHEM 141 & CHML 141	General Chemistry and Lab	4	DPR		
BIO 111 & BIOL 111	General Biology I and Lab	4	GEC		
	Humanities & Fine Arts Option	3	GEC		
	TOTAL CREDIT HOURS	16	TERM GPA:		
Comments:					

FRESHMAN YEAR SPRING 2ND SEMESTER					
COURSE	**COURSE TITLE**	**CREDIT HOURS**	**COURSE TYPE**	**GRADE**	**SUCCESS MARKER/NOTE**
CHEM 142 & CHML 142	General Chemistry II & Lab	4	DPR		
ENG 105	Composition II	3	GEC		
MATH 241	Calculus I & Lab	3	GEC		
	Humanities & Fine Arts Option	3	GEC		
	Pathway Option	3	PATH		
	TOTAL CREDIT HOURS	16	TERM GPA:		
Comments:					

SOPHOMORE YEAR FALL 1ST SEMESTER					
COURSE	**COURSE TITLE**	**CREDIT HOURS**	**COURSE TYPE**	**GRADE**	**SUCCESS MARKER/**
CHEM 241 & CHML 241	Organic Chemistry I & Lab	4	DPR		
MATH 242	Calculus II & Lab	3	DPR		
PHY 211 & PHYL 211	General Physics I & Lab	4	GEC		
	Humanities & Fine Arts Option	3	GEC		
	Pathway Option	3	PATH		
	TOTAL CREDIT HOURS	17	TERM GPA:		
Comments:					

SOPHOMORE YEAR SPRING 2ND SEMESTER					
COURSE	**COURSE TITLE**	**CREDIT HOURS**	**COURSE TYPE**	**GRADE**	**SUCCESS MARKER/**
UNIV 200	Civic Engagement	1	UR		
CHEM 242 & CHML 242	Organic Chemistry II & Lab	4	DPR		
PHY 212 & PHYL 212	General Physics II & Lab	4	DPR		
CHEM 340 & CHML 340	Inorganic Chemistry & Lab	4	DPR		Spring Only
MATH 243	Calculus III	3	PC		
	Pathway Option	3	PATH		
	TOTAL CREDIT HOURS	19	TERM GPA:		
Comments:					

JUNIOR YEAR FALL 1ST SEMESTER					
COURSE	**COURSE TITLE**	**CREDIT HOURS**	**COURSE TYPE**	**GRADE**	**SUCCESS MARKER/**
CHEM 320 & CHML 320	Analytical Chemistry & Lab	4	DPR		Fall Only
CHEM 381	Chemistry Seminar	0.5	DPR		Fall Only
CHEM 341 & CHML 341	Physical Chemistry & Lab	4	DPR		Fall Only
CHEM 380	Independent Study	1	DPR		
	Social & Behavioral Science Option	3	GEC		
	TOTAL CREDIT HOURS	12.5	TERM GPA:		
Comments:					

JUNIOR YEAR SPRING 2ND SEMESTER					
COURSE	**COURSE TITLE**	**CREDIT HOURS**	**COURSE TYPE**	**GRADE**	**SUCCESS MARKER/**
CHEM 310	Introduction to Research	2	DPR		Spring Only
CHEM 342 & CHML 342	Physical Chemistry II & Lab	4	PC		Spring Only
CHEM 382	Chemistry Seminar II	0.5	DPR		Spring Only
CHEM 429	Organic Structure Determination by Spectroscopy	3	PC		Spring Only
	Social & Behavioral Science Option	3	GEC		
	TOTAL CREDIT HOURS	12.5	TERM GPA:		
Comments:					

SENIOR YEAR FALL 1ST SEMESTER					
COURSE	**COURSE TITLE**	**CREDIT HOURS**	**COURSE TYPE**	**GRADE**	**SUCCESS MARKER/**
CHEM 431 & CHML 431	Biochemistry & Lab	4	DPR		
CHEM 481	Chemistry Seminar III	0.5	DPR		Fall Only
CHEM 380	Independent Study	1	DPE		
	Advance Chemistry Elective	3	PC		
	General Elective	3	GEL		
	General Elective	3	GEL		
	TOTAL CREDIT HOURS	14.5	TERM GPA:		
Comments:					

SENIOR YEAR SPRING 2ND SEMESTER					
COURSE	**COURSE TITLE**	**CREDIT HOURS**	**COURSE TYPE**	**GRADE**	**SUCCESS MARKER/**
CHEM 421 & CHML 421	Instrumentation & Lab	4	DPR		Spring Only
CHEM 482	Chemistry Seminar IV	0.5	DPR		Spring only
	Advanced Chemistry Elective	3	PC		
	General Elective	3	GEL		
	General Elective	3	GEL		
	TOTAL CREDIT HOURS	13.5	TERM GPA:		
Comments:					

TOTAL HOURS: 121 REQUIRED

Candidates that transfer 12 or more hours of college credit are exempt from UNIV 100: University Success; however, the student must take 2 hours of general electives to replace UNIV 100.

Student Signature: _____ Advisor Signature: _____