

# CHEMISTRY (B.S.) FORENSIC CONCENTRATION

## Major Requirements

Code	Title	Hours
CHEM 141 & CHEM 142	GENERAL CHEMISTRY I and GENERAL CHEMISTRY II	6
CHML 141 & CHML 142	GENERAL CHEMISTRY LAB and GENERAL CHEMISTRY II LAB	2
CHEM 241 & CHEM 242	ORGANIC CHEMISTRY I and ORGANIC CHEMISTRY II	6
CHML 241 & CHML 242	ORGANIC CHEMISTRY I LAB and ORGANIC CHEMISTRY II LAB	2
CHEM 310	INTRO TO SCIENTIFIC RESEARCH	2
CHEM 320 & CHML 320	ANALYTICAL CHEMISTRY and ANALYTICAL CHEMISTRY LAB	4
CHEM 340 & CHML 340	INORGANIC CHEMISTRY I and INORGANIC CHEMISTRY LAB	4
CHEM 341 & CHML 341	PHYSICAL CHEMISTRY I and PHYSICAL CHEMISTRY I LAB	4
CHEM 421 & CHML 421	CHEMICAL INSTRUMENTATION and CHEMICAL INSTRUMENTATION LAB	4
CHEM 381	CHEMISTRY SEMINAR	0.5
CHEM 382	CHEMISTRY SEMINAR	0.5
CHEM 481	CHEMISTRY SEMINAR	0.5
CHEM 482	CHEMISTRY SEMINAR	0.5
MATH 242	CALCULUS II WITH LABORATORY	3
<b>Total Hours</b>		<b>39</b>

## Concentration (Forensic Chemistry)

Code	Title	Hours
PHY 201 & PHYL 201	BASIC PHYSICS I and BASIC PHYSICS LAB I	4
PHY 202 & PHYL 202	BASIC PHYSICS II and BASIC PHYSICS LAB II	4
CHEM 371 & CHML 371	FORENSIC CHEMISTRY and FORENSIC CHEMISTRY LAB	4
BIO 313	INTRODUCTION TO MICROBIOLOGY	3
CJ 100	INTRODUCTI TO CRIMINAL JUSTICE	3
CJ 443	FOUND OF CRIMINAL INVEST	3
Statistics Option		3
CHEM 431 & CHML 431	BIOCHEMISTRY I and BIOCHEMISTRY I LAB	4
CHEM 471	FORENSIC TOXICOLOGY	3
CHEM 475	FORENSIC PRACTICUM	3
<b>Total Hours</b>		<b>34</b>

## Curriculum Map

Course	Title	Hours
<b>Freshman</b>		
<b>Fall</b>		
BIO 111 & BIOL 111	GENERAL BIOLOGY and GENERAL BIOLOGY LAB	4

CHEM 141 & CHML 141	GENERAL CHEMISTRY I and GENERAL CHEMISTRY LAB	4
ENG 104 or ENG 103 or ENG 111	COMPOSITION I or English Composition I with Co-requisite Support or COMPOSITION & LITERATURE FOR L	3
UNIV 100	UNIVERSITY SUCCESS	2
Humanities & Fine Arts Option		3

**Hours 16**

<b>Spring</b>		
BIO 112 & BIOL 112	GENERAL BIOLOGY and GENERAL BIOLOGY LAB	4
CHEM 142 & CHML 142	GENERAL CHEMISTRY II and GENERAL CHEMISTRY II LAB	4
ENG 105 or ENG 112	COMPOSITION II or COMPOSITION	3
MATH 241	CALCULUS I WITH LABORATORY	3
Pathway Option		3

**Hours 17**

<b>Sophomore</b>		
<b>Fall</b>		
CHEM 241 & CHML 241	ORGANIC CHEMISTRY I and ORGANIC CHEMISTRY I LAB	4
MATH 242	CALCULUS II WITH LABORATORY	3
PHY 211 & PHYL 211	General Physics I and GENERAL PHYSICS LAB I	4
Humanities & Fine Arts Option		3
Pathway Option		3

**Hours 17**

<b>Spring</b>		
CHEM 242 & CHML 242	ORGANIC CHEMISTRY II and ORGANIC CHEMISTRY II LAB	4
CHEM 340 & CHML 340	INORGANIC CHEMISTRY I and INORGANIC CHEMISTRY LAB	4
PHY 212 & PHYL 212	General Physics II and GENERAL PHYSICS LAB II	4
UNIV 200		1
Pathway Option		3

**Hours 16**

<b>Junior</b>		
<b>Fall</b>		
CHEM 320 & CHML 320	ANALYTICAL CHEMISTRY and ANALYTICAL CHEMISTRY LAB	4
CHEM 341 & CHML 341	PHYSICAL CHEMISTRY I and PHYSICAL CHEMISTRY I LAB	4
CHEM 381	CHEMISTRY SEMINAR	0.5
Social & Behavioral Science		3
Humanities & Fine Arts Option		3

**Hours 14.5**

<b>Spring</b>		
CHEM 310	INTRO TO SCIENTIFIC RESEARCH	2
CHEM 371 & CHML 371	FORENSIC CHEMISTRY and FORENSIC CHEMISTRY LAB	4
CHEM 382	CHEMISTRY SEMINAR	0.5
Statistics Option		3
MATH 271 or BIO 202 or PSY 211	ELEMENTARY STATISTICS I or ELEMENTARY BIostatistics or STATISTICS I	3
Social & Behavioral Science Option		3

**Hours 12.5**

<b>Senior</b>		
<b>Fall</b>		
BIO 313	INTRODUCTION TO MICROBIOLOGY	3
CHEM 431 & CHML 431	BIOCHEMISTRY I and BIOCHEMISTRY I LAB	4
CHEM 471	FORENSIC TOXICOLOGY	3

CHEM 481	CHEMISTRY SEMINAR	0.5
CJ 100	INTRODUCTI TO CRIMINAL JUSTICE	3
<b>Hours</b>		<b>13.5</b>
<b>Spring</b>		
CHEM 421 & CHML 421	CHEMICAL INSTRUMENTATION and CHEMICAL INSTRUMENTATION LAB	4
CHEM 432	BIOCHEMISTRY II	3
CHEM 475	FORENSIC PRACTICUM	3
CHEM 482	CHEMISTRY SEMINAR	0.5
CJ 443	FOUND OF CRIMINAL INVEST	3
<b>Hours</b>		<b>13.5</b>
<b>Total Hours</b>		<b>120</b>

**Notes:**

- 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 the UNIV course.
- Standardized Tests (GRE, MCAT, MFT, PCAT, etc), the Chemistry Exit Exam, Research Report, and Research Presentation are required before graduation.
- Online Graduation Clearance (**to be completed during the graduating semester only**).

## Student Learning Outcomes

JSU Chemistry graduates will:

- acquire comprehensive knowledge of the fundamentals and application of major scientific theories in chemistry;
- be able to carry out laboratory experiments in chemistry in a safe manner as well as accurately record, analyze, and interpret the results of such experiments.
- learn, develop, and be able to apply information literacy skills in chemistry.
- be able to clearly communicate chemistry knowledge in both oral and written formats.
- be able to participate and contribute to new scientific discoveries and/or technology development efforts using their chemistry knowledge.