

# Chemistry Program

## OVERVIEW OF THE PROGRAM

Our mission as a department is to help students gain a fundamental knowledge of modern chemistry, including the ability to apply computers, mathematics, biology and physics to the field. Another integral part of our mission is to foster excellent oral and written communication skills. With small class sizes, innovative teaching approaches, and hands-on access to modern, research-quality instrumentation, we support students in developing the analytical, problem-solving and teamwork skills necessary to successfully pursue science-based careers. Graduates of the FSU chemistry program currently have a 100% acceptance rate when applying to graduate school.

Programs available for students who wish to specialize in chemistry include a B.S. degree in chemistry, a B.S. degree in chemistry with an emphasis in biotechnology, and a B.A. in education with a chemistry teaching field.

## EMPLOYMENT OPPORTUNITIES

The B.A. in education with a teaching field in chemistry equips the graduate to teach chemistry in any secondary school or to pursue graduate studies in science education. A student completing the B.S. degree with a major in chemistry will be competitive for graduate study in chemistry or chemical engineering, laboratory positions in the chemical or pharmaceutical industry or government agencies, or law school. Recent FSU chemistry graduates have been accepted to chemistry graduate programs at schools such as Northwestern, Penn State, West Virginia University, University of North Carolina at Chapel Hill, and Johns Hopkins, and have found employment as chemical professionals at institutions such as NIOSH (National Institutes of Occupational Safety and Health), Mylan Pharmaceuticals, Dow Chemical, and environmental testing laboratories. By electing two additional biology classes and/or taking the further steps to complete the biotechnology emphasis, students completing a B.S. degree in chemistry will be prepared for application to a variety of professional and graduate schools, including medical school, dental school, veterinary school, physical therapy programs, toxicology, pharmaceutical science and forensic science graduate programs.

FOR MORE INFORMATION VISIT

[www.fairmontstate.edu/academics/collegeofscitech/default.asp](http://www.fairmontstate.edu/academics/collegeofscitech/default.asp)



*fact*

*The annual median wage for a Chemist is \$63,490.00.*

## CONTACT INFORMATION

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# MODEL SCHEDULE

## Chemistry (B.S.) Math ACT 21-22\*\*\*

### FRESHMAN FIRST SEMESTER

CHEM 1105	CHEMICAL PRINCIPLES I.....	5
MATH 1112	COLLEGE ALGEBRA .....	3
ENGL 1104	WRITTEN ENGLISH I .....	3
ELECTIVE	.....	4
G.S./ELECTIVE	.....	3
-OR-		
COMM 2200 OR 2201 OR 2202	.....	3
		18

### FRESHMAN SECOND SEMESTER

CHEM 1106	CHEMICAL PRINCIPLES II.....	4
CHEM 1113	PRACTICAL SCIENTIFIC STATS .....	1
MATH 1115	TRIGONOMETRY.....	3
ENGL 1108	WRITTEN ENGLISH II.....	3
G.S./ELECTIVE	.....	4
		15

### SOPHOMORE FIRST SEMESTER

CHEM 2201	ORGANIC CHEMISTRY I.....	4
CHEM 2205	ANALYTICAL CHEMISTRY.....	4
MATH 1185	APPLIED CALCULUS I.....	4
PHYS 1101	INTRO. TO PHYSICS I.....	4
		16

### SOPHOMORE SECOND SEMESTER

CHEM 2202	ORGANIC CHEMISTRY II.....	4
CHEM 2215	INTERMED. INSTRUM. ANALYSIS.....	4
PHYS 1102	INTRODUCTION TO PHYSICS II.....	4
MATH 1186	APPLIED CALCULUS II.....	4
		16

### JUNIOR FIRST SEMESTER

CHEM 3301	PHYSICAL CHEMISTRY I.....	4
CHEM 4405	ADVANCED INTEGRATED LAB.....	2
G.S./ELECTIVE	.....	3
-OR-		
COMM 2200 OR 2201 OR 2202	.....	
G.S./ELECTIVE	.....	3
G.S.	.....	3
		15

### JUNIOR SECOND SEMESTER

BIOL 3360	BIOCHEMISTRY.....	4
CHEM 3302	PHYSICAL CHEMISTRY.....	4
CHEM 4405	ADVANCED INTEGRATED LAB.....	2
G.S./ELECTIVE	.....	3
G.S.	.....	3
		16

### SENIOR FIRST SEMESTER

CHEM 4450	ADVANCED INORGANIC CHEM.....	3
CHEM 4405	ADVANCED INTEGRATED LAB.....	2
G.S./ELECTIVE	.....	3
G.S./ELECTIVE	.....	3
G.S./ELECTIVE	.....	3
G.S.	.....	3
		17

### SENIOR SECOND SEMESTER

CHEM 4455	ADVANCES IN MODERN CHEM.....	3
CHEM 4405	ADVANCED INTEGRATED LAB.....	1
G.S./ELECTIVE	.....	3
G.S.	.....	3
G.S./ELECTIVE	.....	3
G.S./ELECTIVE	.....	3
		15

Note: Math ACT requirements may be satisfied by COMPASS score equivalents.

\*\*\*Note: Students with ACT Math less than 21 will need an extra year to take developmental or other prerequisite Math courses and Chem 1101 before beginning the model schedule listed above.

# MODEL SCHEDULE

## Chemistry (B.S.) Math ACT 23-Up\*\*\*

### FRESHMAN FIRST SEMESTER

CHEM 1105	CHEMICAL PRINCIPLES I.....	5
MATH 1115	TRIGONOMETRY (OR HIGHER***).....	3
ENGL 1104	WRITTEN ENGLISH I .....	3
G.S./ELECTIVE	.....	3
-OR-		
COMM 2200 OR 2201 OR 2202	.....	3
ELECTIVE	.....	4
		18

### FRESHMAN SECOND SEMESTER

CHEM 1106	CHEMICAL PRINCIPLES II.....	4
CHEM 1113	PRACTICAL SCIENTIFIC STATS .....	1
MATH 1185	APPLIED CALCULUS I (OR 1190).....	4
ENGL 1108	WRITTEN ENGLISH II.....	3
G.S./ELECTIVE	.....	4
		16

### SOPHOMORE FIRST SEMESTER

CHEM 2201	ORGANIC CHEMISTRY I.....	4
CHEM 2205	ANALYTICAL CHEMISTRY.....	4
PHYS 1105	PRINCIPLES OF PHYSICS I (OR 1101).....	4
G.S./ELECTIVE	.....	3
-OR-		
COMM 2200 OR 2201 OR 2202	.....	
		15

### SOPHOMORE SECOND SEMESTER

CHEM 2202	ORGANIC CHEMISTRY II.....	4
CHEM 2215	INTERMEDIATE INSTRUMENTAL ANALYSIS.....	4
MATH 1186	APPLIED CALCULUS II (OR 3315).....	4
PHYS 1106	PRINCIPLES OF PHYSICS II (OR 1102).....	4
		16

### JUNIOR FIRST SEMESTER

CHEM 3301	PHYSICAL CHEMISTRY I.....	4
CHEM 4405	ADVANCED INTEGRATED LAB.....	2
G.S./ELECTIVE	.....	3
G.S./ELECTIVE	.....	3
G.S.	.....	3
		15

### JUNIOR SECOND SEMESTER

BIOL 3360	BIOCHEMISTRY.....	4
CHEM 3302	PHYSICAL CHEMISTRY II.....	4
CHEM 4405	ADVANCED INTEGRATED LAB.....	2
G.S./ELECTIVE	.....	3
G.S.	.....	3
		16

### SENIOR FIRST SEMESTER

CHEM 4450	ADVANCED INORGANIC CHEM.....	3
CHEM 4405	ADVANCED INTEGRATED LAB.....	2
G.S./ELECTIVE	.....	3
G.S./ELECTIVE	.....	3
G.S./ELECTIVE	.....	3
G.S.	.....	3
		17

### SENIOR SECOND SEMESTER

CHEM 4455	ADVANCES IN MODERN CHEM.....	3
CHEM 4405	ADVANCED INTEGRATED LAB.....	1
G.S./ELECTIVE	.....	3
G.S.	.....	3
G.S./ELECTIVE	.....	3
G.S./ELECTIVE	.....	3
		15