

## General Education

### Foundations: (13 Credits)

#### Oral Communication (3 Credits)

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#### Written Communication (3 Credits)

ENGL 1200 College Composition

#### Quantitative Reasoning (4 Credits)

MATH2410 Analytical Geometry and Calculus I

#### Technological Literacy (3 Credits)

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### Discoveries: (Credits 29)

#### Art/Humanities (9 Credits)

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#### Social Sciences (9 Credits)

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#### Natural Sciences & Technology (11 Credits)

CHEM 1108 General Chemistry I

MATH 2420 Analytical Geometry and Calculus II

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### Program Elective: (4 Credits)

CHEM 1128 General Chemistry II

### Competencies:

#### Quantitative Applications

CHEM 1108 General Chemistry I

#### Applied Methodologies

CHEM 1128 General Chemistry II

#### Intercultural Fluency

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#### Ethical Reasoning

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#### Information Literacy

CHEM 3010 Chemistry Career and Professional Development II

#### Writing Intensive

CHEM 2205 Organic Chemistry I Laboratory

#### Writing Intensive

CHEM 4605 Biochemistry I Laboratory

#### Keystone Experience

CHEM 4900 Chemistry Capstone

## Program Requirements

### Required Major Courses: (46-48 Credits)

PHYS 1500/10 General Physics I or PHYS 2500/10 University Physics I

PHYS 1600/10 General Physics II or PHYS 2600/10 University Physics II

CHEM 2010 Chemistry Career and Professional Development I

CHEM 2200 Organic Chemistry I

CHEM 2205 Organic Chemistry I Laboratory

CHEM 2250 Organic Chemistry II

CHEM 3010 Chemistry Career and Professional Development II

CHEM 3300 Inorganic Chemistry I

CHEM 3305 Inorganic Chemistry I Laboratory or CHEM 3315 Intermediate Chemistry I Laboratory

CHEM 3350 Inorganic Chemistry II

CHEM 3400 Quantitative Chemical Analysis

CHEM 3405 Quantitative Chemical Analysis Laboratory or CHEM 3415 Intermediate Chemistry II Laboratory

CHEM 3450 Instrumental Analysis

CHEM 4500 Physical Chemistry I

CHEM 4505 Physical Chemistry I Laboratory or CHEM 4515 Intermediate Chemistry III Laboratory

CHEM 4550 Physical Chemistry II

CHEM 4600 Biochemistry I

CHEM 4605 Biochemistry I Laboratory

CHEM 4900 Chemistry Capstone

### Major Electives: (6-7 Credits)

**Choose 4 or More Credits:** CHEM 2255, CHEM 3355, CHEM 3455, CHEM 4115, CHEM 4555, CHEM 4905, CHEM 4915

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**Choose At Least 1:** CHEM 2800, CHEM 3250, CHEM 3270, CHEM 3290, CHEM 3370, CHEM 3650, CHEM 3670, CHEM 3900, CHEM 4200, CHEM 4250, CHEM 4650, CHEM 4670, CHEM 4700, CHEM 4750, CHEM 4800, CHEM 4950

### Free Electives: (22 Credits)

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## Suggested Four Year Course Sequence

### Year 1

#### Fall Semester

CHEM1108 General Chemistry I  
ENGL1200 College Composition  
MATH1410 Pre-calculus\*  
GenEd Foundation- Tech Literacy

#### Spring Semester

CHEM1128 General Chemistry II  
MATH2410 Analyt Geom & Calculus I  
GenEd Foundation- Oral Communication  
GenEd Discoveries  
Minor Requirement/Elective

### Year 3

#### Fall Semester

CHEM3350 Inorganic Chemistry II  
CHEM2255 Inorganic Chemistry II Lab  
CHEM3400 Quant Chem Analysis  
CHEM3405 Quant Chem Analys. Lab OR  
CHEM3415 Int Chemistry Lab II  
GenEd Discoveries  
Minor Requirement/Elective  
Minor Requirement/Elective

#### Spring Semester

CHEM3010 Chem Car Prof Dev II  
CHEM3450 Instrumental Analysis  
CHEM3455 Instrumental Analysis Lab  
CHEM4500 Physical Chemistry I  
CHEM4505 Physical Chemistry I Lab OR  
CHEM4515 Int Chemistry Lab III  
GenEd Discoveries  
Minor Requirement/Elective

### Year 2

#### Fall Semester

CHEM2200 Organic Chemistry I  
CHEM2205 Organic Chemistry I Lab  
CHEM2010 Chem Car Prof Dev I  
MATH2420 Analyt Geom & Calculus II  
PHYS1500/2500 Physics I  
PHYS1510/2510 Physics I Lab  
GenEd Discoveries

#### Spring Semester

CHEM2250 Organic Chemistry II  
CHEM2255 Organic Chemistry II Lab OR CHEM4115 Adv  
Chem Lab  
CHEM3300 Inorganic Chemistry I  
CHEM3305 Inorg Chem I Lab OR  
CHEM3315 Interm Chem Lab I  
PHYS1600/2600 Physics II  
PHYS1610/2610 Physics II Lab  
GenEd Discoveries

### Year 4

#### Fall Semester

CHEM4600 Biochemistry I  
CHEM4605 Biochemistry I Lab  
CHEM4550 Physical Chemistry II  
CHEM4555 Physical Chemistry II Lab OR  
CHEM4115 Adv Chemistry Lab  
Research or Advanced Lab (as needed)  
Minor Requirements/Elective

#### Spring Semester

CHEM4250 Polymer Chemistry  
CHEM4900 Chemistry Capstone  
Research or Advanced Lab (as needed)  
Minor Requirements/Elective  
Minor Requirements/Elective  
General Education Discoveries

**NOTE:** MATH1410 Pre-calculus is an elective course for students not prepared to take MATH2410 in semester 1. If a student is prepared for MATH2410, they can take that in semester 1.

