



# ASSOCIATE OF SCIENCE

## CHEMISTRY

The catalog in force is assigned to students based on the academic year they first applied to the college, and changes only when students change their major or request the change in writing. Refer to Policy No. 3357:15-13-28.

2021 Catalog  
Effective Summer 2021

1260

Arts and Sciences Division

Chemistry Department

Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
<b>FRESHMAN EXPERIENCE</b>				
SSC101	Student Success Seminar^^	1	Take first semester	
<b>WRITTEN &amp; ORAL COMMUNICATION:</b>				
ENG124	College Composition^	3	Co-ENG024 or Co-ENG011 or Proficiency	
<b>SOCIAL &amp; BEHAVIORAL SCIENCES: 6 credit hours minimum</b>				
BUS122	Basic Economics^	3	IDS102 or Proficiency	
PSY121	General Psychology^	3	IDS102 or Proficiency	
BUS221	Microeconomics^	3	IDS102 or Proficiency	
BUS222	Macroeconomics^	3	IDS102 or Proficiency	
CJS121	Introduction to Criminal Justice	3		
PSC121	Political Science	3		
PSY124	Industrial/Organizational Psychology	3		
SOC121	Sociology^	3	IDS102 or Proficiency	
PSY220	Social Psychology	3		
SOC122	Society and Technology	3		
SOC225	Cultural Diversity (required)	3		
<b>ARTS &amp; HUMANITIES: 6 credit hours minimum</b>				
ENG233	British Literature: Med to 1785	3	ENG124	
ENG234	British Literature: 1785 to Present	3	ENG124	
ENG236	American Literature: Colonial to 1865	3	ENG124	
ENG237	American Literature: 1865 to Present	3	ENG124	
HIS121	U.S. History I to 1877	3		
HIS122	U.S. History II from 1877	3		
HIS221	World Civilization to 17 <sup>th</sup> Century	3		
HIS222	World Civilization from 17 <sup>th</sup> Century	3		
PHL122	Ethics (recommended)	3		
<b>MATHEMATICS: 8 credit hours minimum</b>				
MTH135	Precalculus^ – A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.	5	MTH025 or Proficiency	
MTH223	Analytic Geometry and Calculus I^	4	MTH135	
MTH224	Analytic Geometry and Calculus II	4	MTH223	
MTH225	Analytic Geometry and Calculus III*	4	MTH224	

^ Based on SSC placement scores

^^ To promote student success, this course should be taken in the first semester

\*Required if also taking PHY222

**NATURAL SCIENCES: 7-10 credit hours required. Choose one of the following.****Pre – Bachelor of Science**

PHY221	General Physics I with Calculus (lab) ▲-	5	Pre-MTH223 and Co-MTH224
PHY222	General Physics II with Calculus (lab) ▲+	5	PHY221 and MTH224 and Co-MTH225

**Pre – Bachelor of Arts**

PHY121	College Physics I with Algebra (lab)^	4	MTH135 or (MTH125 and MTH130) or Proficiency
PHY122	College Physics II with Algebra (lab)	4	PHY121

**Forensics**

CHM105	Introduction to Forensic Science (lab)	3	
CHM205	Forensic Chemistry (lab)	4	CHM105 or CHM121 or CHM141

**Biochemistry**

CHM243	Biochemistry I ▲-	3	CHM121 or CHM141
CHM244	Biochemistry II ▲+	3	CHM243
BIO241	General Genetics (lab) ▲-	4	BIO141

**CONCENTRATION CORE: 20 credit hours required.**

CHM141	General Chemistry I (lab)	5	(CHM101 or Proficiency) or (MTH024 or MTH025 or Proficiency)
CHM142	General Chemistry II (lab) ▲+	5	CHM141
CHM241	Organic Chemistry I (lab) ▲-	5	CHM142
CHM242	Organic Chemistry II (lab) ▲+	5	CHM241

**ELECTIVES – Select additional credits from mathematics, natural sciences, or electives categories to complete the total of 60-65 credit hours.**

BIO141	General Biology I (lab)**	4	
BIO142	General Biology II (lab) ▲+	4	
COM121	Effective Speaking	3	
COM122	Interpersonal Communication	3	
ENG231	College Composition II	3	ENG124
SSC201	Study Away: Experiential Learning	1	
ENG221	Technical Report Writing	3	ENG124
PET131	Corrosion Basics		
CSE122	Programming Logic and Problem Solving^	3	(IDS102 or Proficiency) and (ITD100 or Proficiency)
GEO141	Physical Geology (lab)	4	
ITD122	Computer Applications for Professionals^	3	ITD100 or Proficiency
MTH124	Statistics^	3	MTH022 or Pre-Co-MTH024 or Proficiency
MTH227	Ordinary Differential Equations	4	MTH224
PHY105	Astronomy (lab)	4	
SCI273	Special Topics in Science	3	<i>Sophomore in Program</i>

**TOTAL CREDIT HOURS 60-65**

^ Based on SSC placement scores

\*\*Required if taking BIO241

▲-Fall only courses. Please see your academic advisor for availability.

▲+Spring only courses. Please see your academic advisor for availability.

## PART-TIME STUDENT ADVISING NOTES

Academic Advising

Students should make an appointment to see their advisor before registering for classes each semester. They should have prepared a completed registration form, including courses they wish to take, prior to this meeting.

Course Sequence

The semester-by-semester listing below provides the normal scheduling option for part-time students who plan to finish in eight semesters.

Elective Additional Credit

Self-selection of courses and not following the approved degree program could adversely affect graduation, transfer to a 4-year institution, and financial aid. Visit Transferology at <http://www.transferology.com> to assist in developing a plan for transferring to another college or university. Students should select Ohio Transfer Module approved and TAG approved courses.

Bachelor's Degree

Bachelor's degree requirements and course transferability are controlled by the institution to which the student plans to transfer.

## PART-TIME STUDENT ADVISING NOTES

<u>First Semester</u>		<u>Credit Hours</u>	<u>Pre- and Co-requisites</u>
SSC101	Student Success Seminar^^	1	<i>Take first semester</i>
CHM141	General Chemistry I (lab)	5	(CHM101 <b>or</b> Proficiency) <b>or</b> (MTH024 <b>or</b> MTH025 <b>or</b> Proficiency)
<i>Mathematics Elective</i> <sup>3</sup>		<u>4</u>	<i>Check for prerequisite</i>
		<b>10</b>	
<u>Second Semester</u>			
CHM142	General Chemistry II (lab) ▲+	5	CHM141
ENG124	College Composition^	<u>3</u>	Co-ENG024 <b>or</b> Co-ENG011 <b>or</b> Proficiency
		<b>8</b>	
<u>Third Semester</u>			
<i>Mathematics Elective</i> <sup>3</sup>		4	<i>Check for prerequisite</i>
SOC225	Cultural Diversity ( <b>required</b> )	<u>3</u>	
		<b>7</b>	
<u>Fourth Semester</u>			
<i>Arts &amp; Humanities Elective</i> <sup>2</sup>		3	<i>Check for prerequisite</i>
<i>Social &amp; Behavioral Sciences Elective</i> <sup>1</sup>		<u>3</u>	<i>Check for prerequisite</i>
		<b>6</b>	
<u>Fifth Semester</u>			
CHM241	Organic Chemistry I (lab) ▲-	5	CHM142
<i>Arts &amp; Humanities Elective</i> <sup>2</sup>		<u>3</u>	<i>Check for prerequisite</i>
		<b>8</b>	
<u>Sixth Semester</u>			
CHM242	Organic Chemistry II (lab) ▲+	5	CHM241
<i>Elective</i> <sup>5,6</sup>		<u>3-4</u>	<i>Check for prerequisite</i>
		<b>8-9</b>	
<u>Seventh Semester</u>			
<i>Natural Sciences Options</i> <sup>4</sup>		3-5	<i>Check for prerequisite</i>
<i>Elective(s)</i> <sup>3,5</sup>		<u>3-4</u>	<i>Check for prerequisite</i>
		<b>6-9</b>	
<u>Eighth Semester</u>			
<i>Natural Sciences Options</i> <sup>4</sup>		<u>4-7</u>	<i>Check for prerequisite</i>
		<b>4-7</b>	
	<b>TOTAL CREDITS</b>	<b>60-65</b>	

^Based on SSC placement scores

^^To promote student success, this course should be taken in the first semester

<sup>1</sup> **Social & Behavioral Science Elective:** BUS122, BUS221, BUS222, CJS121, PSC121, PSY121, PSY124, PSY220, SOC121, SOC122

<sup>2</sup> **Arts & Humanities Elective:** ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, HIS221, HIS222, PHL122 (*recommended*)

<sup>3</sup> **Mathematics Electives:** MTH135, MTH223, MTH224, MTH225\*

<sup>4</sup> **Natural Sciences Options:** (PHY221 and PHY222) or (CHM243, CHM244 and BIO241) or (CHM105 and CHM205) or (PHY121 and PHY122)

<sup>5</sup> **Electives:** BIO141\*\*, BIO142, COM121, COM122, CSE122, ENG221, ENG231, GEO141, ITD122, MTH124, MTH221, PET131, PHY105, SSC201, SCI273

<sup>6</sup> Select additional courses to complete the total of 60-65 credit hours.

\* Required if also taking PHY222

\*\* Required if also taking BIO241

▲-Fall only courses. Please see your academic advisor for availability.

▲+Spring only courses. Please see your academic advisor for availability.