

CHEMISTRY, ASSOCIATE OF ARTS (AA)

Overview

From its obscure beginnings in alchemy and philosophy, chemistry has emerged as the central science in the modern world. There is virtually no area of science that is unaffected by discoveries in the field of chemistry.

Because chemistry touches so many areas of human activity, it is essential that each individual have a basic understanding of chemical principles. Only in this way can citizens make intelligent decisions concerning applications of technology.

Requirements

Associate Degree Graduation Requirements

Complete all of the following:

1. All Department Requirements listed below with a "C" or better or "P" in each course (at least 20% of the department requirements must be completed through SBCC).
2. One of the following three General Education options:
 - a. OPTION 1: A minimum of 18 units of SBCC General Education Requirements (<https://catalog.sbccc.edu/degrees-certificates-awards/#associateddegreeestext>) (Areas A-D) and Institutional Requirements (Area E) and Information Competency Requirement (Area F) OR
 - b. OPTION 2: IGETC (<https://catalog.sbccc.edu/transfer-curricula/#igetctext>) Pattern OR
 - c. OPTION 3: CSU GE Breadth (<https://catalog.sbccc.edu/transfer-curricula/#csugebtext>) Pattern
3. A total of 60 degree-applicable units (SBCC courses numbered 100 and higher).
4. Maintain a cumulative GPA of 2.0 or better in all units attempted at SBCC.
5. Maintain a cumulative GPA of 2.0 or better in all college units attempted.
6. A minimum of 12 units through SBCC.

Code	Title	Units
Department Requirements		
CHEM 155	General Chemistry I	5
CHEM 156	General Chemistry II	5
CHEM 211	Organic Chemistry I	3
CHEM 212	Organic Chemistry II	3
CHEM 221	Organic Chemistry Laboratory I	2.3
CHEM 222	Organic Chemistry Laboratory II	2.5
Controlled Electives: Complete 8 units from the following: ¹		8-10
MATH 117		
MATH 130	Calculus for Biological Sciences, Social Sciences and Business I	
MATH 131	Calculus For Biological Sciences, Social Sciences And Business II	
MATH 137	College Algebra	
MATH 138	Precalculus - College Algebra and Trigonometry	

MATH 150	Calculus with Analytic Geometry I
MATH 160	Calculus with Analytic Geometry II
MATH 200	Multivariable Calculus
MATH 210	Linear Algebra
MATH 220	Differential Equations
PHYS 105	General Physics
PHYS 106	General Physics
PHYS 121	Mechanics Of Solids And Fluids
PHYS 122	Electricity and Magnetism
PHYS 123	Heat, Light and Modern Physics

Total Units **28.80-30.80**

¹ MATH 140 (21)/MATH 141 (22) and MATH 250/MATH 260 may also count toward the Controlled Electives requirement.

Learning Outcomes

1. Demonstrate proficiency in solving chemical mathematical problems.
2. Demonstrate proficiency in describing atomic structure, bonding and periodic trends.
3. Demonstrate proficiency in naming and writing chemical formulas.
4. Demonstrate proficiency in writing balanced chemical equations and performing stoichiometric calculations.
5. Demonstrate proficiency in predicting the outcome of chemical reactions.
6. Demonstrate proficiency in assembling laboratory glassware and performing laboratory techniques.
7. Demonstrate proficiency in making and recording experimental observations and interpreting the results.

Recommended Sequence

Make an appointment with your SBCC academic counselor through Starfish to create a Student Education Plan that reflects a recommended course sequence for this program that is tailored to your individual needs.

How to schedule an Academic Counseling appointment (<https://www.sbccc.edu/counselingcenter/counselingappointments.php>).