ANALYTICAL CHEMISTRY

Associate in Science Degree and Certificate of Achievement*

Chemistry technicians preform very important roles in analytical laboratories in academic, research and industrial institutions. They perform duties such as assisting instructors prepare materials for laboratory classes, assisting researchers collect and analyze scientific data, or gathering data for product quality control in industries. At Berkeley City College we offer a two-year (four-semester) Analytical Chemistry program designed to provide individuals with the analytical skills needed for entry-level employment as laboratory technicians in those institutions. At the same time, the Analytical Chemistry program at BCC also prepares students for transfer to four year colleges or universities.

Career Opportunities: Entry level technicians in State and Federal laboratories, academic research laboratories, industrial, pharmaceutical and environmental health laboratories.

Required Courses:		*Units*
CHEM 1A	General Chemistry	5
CHEM 1B	General Chemistry	5
CHEM 12A	Organic Chemistry	5
CHEM 12B	Organic Chemistry	5
CHEM 18	Analytical Instrumentation	3
CIS 1	Introduction to Computer Information Systems	4
Select 9-10 units from the following:		
BIOL 1A	General Biology	5
BIOL 1B	General Biology	5
MATH 3A	Calculus I	5
MATH 3B	Calculus II	5
MATH 13	Introduction to Statistics	4
PHYS 3A	General Physics	5
PHYS 3B	General Physics	5
PHYS 4A	General Physics with Calculus	5
PHYS 4B	General Physics with Calculus	5
	Major Requirements	36–37
	General Education and Electives	23–24
	Total Units	60

**For the Certificate of Achievement, students must complete the 36–37 units of core courses. For the Associate Degree, students must complete the 36–37 units of core courses plus 23–24 units of General Education requirements and elective courses.*

Analytical Chemistry

Associate in Science Degree and Certificate of Achievement
Recommended Two-Year Course Sequence Beginning in the Fall Semester

Students can use the following pattern to complete an Associate in Science degree or Certificate of Achievement in Analytical Chemistry. This is only one possible pattern. If you wish to earn an associate degree or certificate, you must participate in the Student Success Program (Matriculation), which includes assessing academic skills and developing a Student Education Plan (SEP) with a Counselor. This plan will map your sequence of courses to help you complete your degree regardless of the semester you begin classes.

Courses:		*Units*
	1st Semester/Fall	
CHEM 1A	General Chemistry	5
CIS 1	Introduction to Computer Information Systems	4
	General Education and Electives	6
	Total Units	15
	2nd Semester/Spring	
CHEM 1B	General Chemistry	5
	General Education and Electives	10
	Total Units	15
	3rd Semester/Fall	
CHEM 12A	Organic Chemistry	5
	General Education and Electives	10
	Total Units	15
	4th Semester/Spring	
CHEM 12B	Organic Chemistry	5
CHEM 18	Analytical Instrumentation	3
	General Education and Electives	7
	Total Units	15

Program Learning Outcomes

Students who complete the program will be able to:

- Demonstrate an understanding of and ability to follow protocols and use of standard and analytical equipment, materials, and techniques employed in general, organic and analytical chemistry laboratory.
- Demonstrate the ability to perform basic calculations related to preparation of solutions and quantitative and qualitative analyses commonly used in experiments in chemistry.
- Demonstrate the ability to work individually or with a team on any assignments.