

## CHEMISTRY—ASSOCIATE IN SCIENCE IN CHEMISTRY FOR TRANSFER (AS-T)

### PROGRAM DESCRIPTION

The Chemistry program at Hartnell College is designed to meet the needs of the diverse community of interests served by the community college. A full program of chemistry for the aspiring professional scientist is offered through general chemistry and a two-semester course in organic chemistry. A separate track is offered for nursing and allied health students which includes general inorganic, organic and biochemistry. The Chemistry discipline also has a strong commitment to the student with little or no prior chemistry background. The entire program is taught with a strong laboratory emphasis, and in the more advanced classes, students receive hands-on experience with a wide variety of instruments.

Four-year graduates in chemistry are qualified for positions in research, industry, education, engineering, and the allied medical fields.

The Associate in Science degree in Chemistry for Transfer provides a clearly articulated curricular track for students who wish to transfer to baccalaureate degree programs at a California State University (CSU) campus. For detailed requirements for individual four-year institutions, students should contact the transfer institution and/or meet with a counselor for specific transfer course requirements in their major.

### FOR MORE INFORMATION, CONTACT:

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### PROGRAM OUTCOMES

Upon successful completion of the Chemistry program, a student should be able to:

- apply appropriate chemical theories, concepts, principles, methods, and laboratory skills to relevant science and engineering settings.
- demonstrate competence in chemistry laboratory techniques and experimental methods.



California Community Colleges are now offering associate degrees for transfer to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses.

Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units.

In order to earn this degree, students must complete the Associate Degree for Transfer requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
  - (A) The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements.
  - (B) A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.
2. Obtainment of a minimum grade point average of 2.0."

ADTs also require that students must earn a C or better in all courses required for the major or area of emphasis. A "P" (Pass) grade is not an acceptable grade for courses in the major.

✓	REQUIRED MAJOR COURSES	Course No.	Course Title	Units
	Required Major Course	CHM-1A	General Chemistry I	5.0
	Required Major Course	CHM-1B	General Chemistry II	5.0
	Required Major Course	CHM-12A	Organic Chemistry I	5.0
	Required Major Course	CHM-12B	Organic Chemistry II	5.0
	Required Major Course	PHY-4A	General Physics/Mechanics	4.0
	Required Major Course	PHY-4B	General Physics/Electricity and Magnetism	4.0
	Required Major Course	MAT-3A	Analytic Geometry and Calculus I	4.0
	Required Major Course	MAT-3B	Analytic Geometry and Calculus II	4.0
			<b>SUBTOTAL UNITS (36)</b>	
✓	RECOMMENDED MAJOR ELECTIVES (Select from list; none required:)	Course No.	Course Title	Units
	Recommended Major Elective	MAT-3C	Analytic Geometry and Calculus III	4.0
	Recommended Major Elective	MAT-5	Differential Equations	3.0
	Recommended Major Elective	MAT-4	Linear Algebra	3.0
	Recommended Major Elective	PHY-4C	General Physics/Waves, Heat, Light and Modern Physics	4.0
			<b>SUBTOTAL UNITS (0)</b>	
✓	REQUIRED GENERAL EDUCATION COURSES (Students can double count General Education courses with major courses.)			Units
		B. Minimum units to meet IGETC for STEM (31 units) certification requirements		31.0
		Chemistry Required Major and Restricted Electives		36.0
		Total Double-counted units		(7)
		<b>Electives (Courses numbered 1-99) required when degree units plus GE units total fewer than 60.0</b>		
		<b>TOTAL</b>		<b>60.0</b>

**Students can double-count required degree courses and courses for General Education**

**TRANSFER STUDENTS:** Students planning to transfer to a university should follow the requirements of the four-year university. Information on course equivalencies and major preparation requirements for the University of California (UC) and California State University (CSU) systems are available online at [. Please consult with a Hartnell College counselor to review transfer requirements.](#)

**IGETC for STEM or CSU-GE for STEM is applicable for the AS-T Chemistry for Transfer.**

(IGETC/CSU for STEM- All AREAS will be completed with minimum units/courses as required and listed on IGETC except AREAS 3 and 4, which are approved with 6 units/2 courses. CSU-GE for STEM- All AREAS will be completed with minimum units/courses as required and listed on CSU-GE except AREAS C and D, which are approved with 6 units/2 courses). These GE courses are not waived but will be completed after transfer.