ASSOCIATE OF SCIENCE IN CHEMISTRY FOR UC TRANSFER PATHWAY (AS-UCTP in Chemistry)

The Associate of Science in Chemistry for UC Transfer Pathway (AS-UCTP in Chemistry) is a program which provides students the lower division coursework required for transfer to a UC institution for the major in Chemistry for a goal of a baccalaureate degree. Students who complete the Associate of Science in Chemistry for UC Transfer Pathway (AS-UCTP in Chemistry) will be able to:

- Use physical and chemical concepts as well as mathematical skills to solve chemistry problems that demonstrate critical thinking and scientific inquiry.
- Perform hypothesis driven laboratory experiments using appropriate instruments and basic software, such as spreadsheets and graphing programs, as well as analyze and interpret data and identify sources of error to form appropriate conclusions.
- Provide technical information in a clear and concise manner to demonstrate effective written and oral communication skills for chemical and physical concepts, results of laboratory experiments, and articles in the scientific literature.

Students must complete the following requirements:

- 70-74 semester or 105-111 quarter UC-transferable units.
- Intersegmental General Education Transfer Curriculum (IGETC) pattern which is a minimum of 16 semester or 24 quarter units.
- A minimum of 54 semester or 81 quarter units in the major or area of emphasis.
- Obtainment of a minimum grade point average (GPA) of 3.5.

**Required Core Courses: 54 Units**

CHM 001A - General Chemistry – 5 units  
CHM 001B - General Chemistry - 5 units  
CHM 012A - Organic Chemistry - 5 units  
CHM 012B - Organic Chemistry - 5 units  

MATH 003A - Calculus and Analytic Geometry - 5 units  
OR  
MATH 003AH – Honors Calculus and Analytic Geometry - 5 units  

MATH 003B - Calculus and Analytical Geometry - 5 units  
OR  
MATH 003BH - Honors Calculus and Analytical Geometry - 5 units  

MATH 004A - Intermediate Calculus - 5 units  
MATH 004B - Differential Equations - 4 units
PHYS 004A - Engineering Physics-Mechanics - 5 units  
PHYS 004B - Engineering Physics - Electricity and Magnetism - 5 units  
PHYS 004C - Engineering Physics-Light, Heat and Waves - 5 units

**Total Major Units: 54**  
**IGETC GE Units: 16-20 (see table below)**  
**Total Program Units: 70-74**

<table>
<thead>
<tr>
<th>IGETC General Education Requirements (16-20 units)</th>
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<tbody>
<tr>
<td>Area 1A Freshman Composition (3 units)</td>
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<tr>
<td>Area 1B Critical Thinking (3 units)</td>
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<tr>
<td>Area 3 Arts and Humanities (3 units)</td>
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<tr>
<td>Area 4 Social and Behavior Science (3 units)</td>
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<tr>
<td>Area 5B Biological Science (4 units)</td>
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<tr>
<td>Area 6 Language other than English (0-4 units)</td>
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**Recommended Sequence:**

**Fall, Year 1: 10 units**  
CHEM 001A, MATH 003A OR MATH 003AH

**Spring, Year 1: 15 units**  
CHEM 001B, PHYS 004A, MATH 003B OR MATH 003BH

**Fall, Year 2: 15 units**  
CHEM 012A, MATH 004A, PHYS 004B

**Spring, Year 2: 14 units**  
CHEM 012B, MATH 004B, PHYS 004C
ASSOCIATE OF SCIENCE IN PHYSICS FOR UC TRANSFER PATHWAY (AS-UCTP in Physics)

The Associate of Science in Physics for UC Transfer Pathway (AS-UCTP in Physics) is a 64-68 unit program which provides students the lower division coursework required for transfer to a UC institution for the major in Physics. Students who complete the AS-UCTP will be able to demonstrate the ability to communicate orally and in writing core physical principles, the results of experiments, and their analysis of physical problems; set up an experiment, collect and analyze data, identify sources of error, and interpret results; use basic software, such as word processing, spreadsheet, and graphing programs; identify the essential aspects of a problem and formulate a strategy for solving the problem; estimate the solution to a problem, apply appropriate techniques to arrive at a solution, test the correctness of their solution, interpret their result and connect it to related areas of physics. Students must complete the following requirements:

- 64-68 semester or 96-102 quarter UC-transferable units;
- the Intersegmental General Education Transfer Curriculum (IGETC) pattern;
- a minimum of 18 semester or 27 quarter units in the major or area of emphasis as determined by the community college district;
- obtainment of a minimum grade point average (GPA) of 3.5;
- earn a grade of B or better in all courses required for the major or area of emphasis.

**Required Core – 48 units**

- CHEM 001A - General Chemistry - 5 units
- CHEM 001B - General Chemistry - 5 units
- PHYS 004A - Engineering Physics-Mechanics - 5 units
- PHYS 004B - Engineering Physics - Electricity and Magnetism - 5 units
- PHYS 004C - Engineering Physics-Light, Heat and Waves - 5 units
- MATH 003A - Calculus and Analytic Geometry - 5 units
  OR
- MATH 003AH - Honors Calculus and Analytical Geometry - 5 units
- MATH 003B - Calculus and Analytical Geometry - 5 units
  OR
- MATH 003BH - Honors Calculus and Analytical Geometry - 5 units
- MATH 004A - Intermediate Calculus - 5 units
- MATH 004B - Differential Equations - 4 units
- MATH 004C - Linear Algebra - 4 units
Total Major Units: 48
IGETC GE Units: 16-20 (see table below)
Total Program Units: 64-68

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Recommended Sequence:

**Fall, Year 1: 10 units**
CHEM 001A, MATH 003A OR MATH 003AH

**Spring, Year 1: 15 units**
CHEM 001B, PHYS 004A, MATH 003B OR MATH 003BH

**Fall, Year 2: 10 units**
MATH 004A, PHYS 004B

**Spring, Year 2: 13 units**
MATH 004B, MATH 004C, PHYS 004C