

# Physical Science Department

## DEGREES

Physical Science (AS)

## COURSES

PHSC (Physical Science)

## CONTACT INFORMATION:

School of Mathematics and Sciences

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**P.A.C.E. - SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE**

### ARE YOU THE KIND OF PERSON WHO...

- ...desires to observe, learn, analyze, evaluate, or solve problems?
- ...enjoys to question and explore physical or biological happenings?
- ...likes to work hands-on with objects, machines, tools, plants, or animals?
- ...is interested in math and/or thinking analytically to solve complex problems?

# Physical Science

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## Physical Science

*Associate in Science*

### Program Description

This program provides students the opportunity to investigate methods of scientific inquiry, and to gain scientific knowledge, through specialization in one or more Physical Science disciplines that align with their personal interests, such as Physics, Chemistry, Astronomy, and Geology. Crucially, students taking this degree will also gain an understanding of the factors that affect the Earth's climate, and will thereby develop a deep understanding of the important issue of Climate Change, which will allow them to be knowledgeable global citizens. Students will develop critical thinking skills, learn to communicate effectively in writing, and acquire an understanding of major scientific concepts. Through course options, students will employ methods of scientific inquiry to understand the world around them. Completion of the degree requirements will prepare students with the skills and resources needed to facilitate academic and career decisions.

The Associate in Science Degree can be obtained by completing the 34-unit major, General Education, and electives as needed to complete a minimum of 60 units. All courses for the major must be completed with a minimum grade of C or a grade of P if the course is taken on a Pass/No Pass basis.

### Program Outcomes

1. Describe physical phenomena in multiple forms (verbal, pictorial, graphical, and mathematical).
2. Qualitatively and quantitatively predict, analyze and/or explain the behavior of physical systems using fundamental physical principles and models.
3. Develop and implement a plan of collecting and/or accessing experimental data, and performing data analysis

### REQUIRED COURSES ..... Units

CIS 001 Introduction to Computer Science .....	3
MATH 011 Elementary Statistics .....	4
PHSC 013 Weather and Climate .....	3
PHSC 014 Atmospheric Science Laboratory .....	1
Option 1 or 2 .....	10
13 Units from List A .....	13
<b>Required Major Total Units .....</b>	<b>34</b>

### Option 1 ..... Units

CHEM 001 General Chemistry I .....	5
CHEM 002 General Chemistry II .....	5

### Option 2 ..... Units

PHYS 002 General Physics (Non-calculus) .....	5
PHYS 004 General Physics (Non-calculus) .....	5

### List A (select 13 units) ..... Units

Any course(s) not used from Option 1 or 2 .....	
ASTR 010 General Astronomy .....	3
ASTR 020 Astronomy Laboratory .....	1
ASTR 040 Stars, Galaxies, and Cosmology .....	3
ASTR 045 Introduction to Astrobiology and the Search for Life in the Universe .....	3
ASTR 050 Astronomical Optics .....	1
CHEM 010 Intermediate Chemistry .....	4
GEOL 001 Physical Geology .....	3
GEOL 002 Geology Laboratory .....	1
GEOL 006 Earth Science .....	3
GEOL 006L Earth Science Laboratory .....	1
PHSC 012 Introduction to Principles of Physical Science .....	4
PHSC 015 Global Climate Change .....	3
PHSC 016 Natural Disasters .....	3