

# CERTIFICATE IN SCIENTIFIC INSTRUMENT DEVELOPMENT

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Units required for Certificate: 11 minimum

## Program Description

A certificate in Scientific Instrument Development is available through the Department of Physics and Astronomy. The Scientific Instrument Development certificate program focuses not only on using scientific instruments, but also will teach the fundamentals of electronics, computer interfacing, and machining. Students that earn this certificate will be prepared to design, prototype, and construct instruments for a wide range of scientific applications.

## Eligibility Information

To receive the certificate in Scientific Instrument Development, students must:

- achieve a 2.5 GPA in the certificate program courses;
- must be working towards a degree at Sacramento State or have special approval from the Chair of the Department of Physics and Astronomy.

## Program Requirements

Code	Title	Units
PHSC 75	Introduction to Machine Shop Practices	2
PHYS 115	Electronics and Instrumentation	4
PHYS 116	Advanced Electronics and Instrumentation	3
Select one of the following:		2 -
		4
CHEM 133	Chemical Instrumentation	
CHEM 141	Physical Chemistry Laboratory	
GEOL 197	Advanced Laboratory Techniques for Geology	
PHYS 175	Advanced Physics Laboratory	
<b>Total Units</b>		<b>11-13</b>