

# SEMICONDUCTORS CERTIFICATE

## Required Course

Code	Title	Hours
EECS 3400	Electronics I	4
Choose 1 Course focused on Devices:		3-4
EECS 4600	Solid State Devices	
EECS 4610	Digital VLSI Design I: Basic Subsystems	
Choose 1 Course focused on Materials and Applications:		3
PHYS 4400	Principles and Varieties of Solar Energy	
PHYS 4510	Physics Of Condensed Matter	
PHYS 4580	Molecular And Condensed Matter Laboratory <sup>1</sup>	
PHYS 4630	Semiconductors 1	
Choose 3 Credits of Laboratory Intensive Work:		3
PHYS 4580	Molecular And Condensed Matter Laboratory <sup>1</sup>	
PHYS 4910	Research Problems-Physics And Astronomy	
PHYS 4940	Internship in Renewable Energy	
<b>Total Hours</b>		<b>13-14</b>

<sup>1</sup> \*PHYS 4580 may not count twice.

- PLO1 Demonstrate an understanding of the electronic properties of semiconductors and their roles in devices.
- PLO2 Demonstrate an understanding of semiconductor materials properties and their origins.
- PLO3 Experiential learning in a hands-on laboratory, research, or industrial setting focusing on semiconductor materials and devices.
- PLO4 Communicate technical information clearly and accurately in written, oral, and visual formats.
- PLO5 Locate and use information in the primary literature and research databases.
- PLO6 Understand and observe proper safety, ethical, and professional practices.
- PLO7 Apply scientific skills in an interdisciplinary scientific context.