

ADVANCED MICROELECTRONICS FABRICATION GRADUATE ACADEMIC CERTIFICATE

students are well-prepared to pursue further education or employment in the advanced microelectronics fabrication field.

All required coursework must be completed with a grade of B or better (O-10-b (<https://catalog.uidaho.edu/general-requirements-academic-procedures/o-miscellaneous/>)).

Code	Title	Hours
ECE 5650	Introduction to Microelectronics Fabrication	3
Select one of the following:		3
ECE 5620	Quantum Mechanics for Electrical Engineers	
PHYS 5640	Solid State Physics	
Select two from the following: ¹		6-7
CHE 4550	Surfaces and Colloids	
CHEM 5580	Electrochemistry	
ECE 5180	Introduction to Electronic Packaging	
ECE 5620	Quantum Mechanics for Electrical Engineers	
GEOL 5490	Principles of Electron Microscopy	
MSE 4230	Corrosion	
MSE 4320	Fundamentals of Thin Film Fabrication	
ME 5580	Finite Element Applications in Engineering	
PHYS 4110	Advanced Physics Lab	
PHYS 5430	Optics	
PHYS 5640	Solid State Physics	
STAT 4190	Introduction to SAS/R Programming	
STAT 4260	SAS Programming	
STAT 4270	R Programming	
STAT 4310	Statistical Analysis	
Total Hours		12-13

¹ Courses chosen must be different from the core courses. At least one course must be 5000-level.

Courses to total 12 credits for this certificate

1. An ability to identify, formulate, and solve advanced microelectronics fabrication problems by applying principles of engineering, science, and mathematics.
2. An ability to communicate effectively on topics related to advanced microelectronics fabrication concepts and technologies with a range of audience.
3. An ability to develop and conduct appropriate advanced microelectronic fabrication experimentation, analyze and interpret data, and use engineering judgment to draw conclusions about microelectronics fabrication.

Overall, these learning outcomes demonstrate that students who have completed a certificate in advanced microelectronics fabrication have acquired the knowledge, skills, and abilities necessary to succeed in various fields of the advanced microelectronics fabrication industry. The