

ELECTRICAL ENGINEERING: SEMICONDUCTOR ENGINEERING, BS

REQUIREMENTS

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Code	Title	Credits
Required Courses		
Complete all:		
E C E 305	Semiconductor Properties Laboratory ¹	1
E C E 335	Microelectronic Devices ²	3
E C E 548	Integrated Circuit Design ²	3
E C E 549	Integrated Circuit Fabrication Laboratory ²	4
Complete one:		3
E C E 445	Semiconductor Physics and Devices ³	
E C E 466	Electronics of Solids ³	
Electives		
Complete two courses:		6
E C E 342	Electronic Circuits II ³	
M S & E 351	Materials Science-Structure and Property Relations in Solids (offered in Fall) ³	
E C E 434	Photonics ^{3, 4}	
M S & E 434	Introduction to Thin-Film Deposition Processes (offered in Spring) ^{3, 5}	
E C E 445	Semiconductor Physics and Devices ^{2, 3}	
M S & E 456	Electronic, Optical, and Magnetic Properties of Materials (offered in Fall) ^{3, 5}	
E C E 466	Electronics of Solids ^{2, 3}	
E C E 535	Introduction to Quantum Sensing ³	
E C E 536	Integrated Optics and Optoelectronics ^{4, 5}	
E C E 541	Analog MOS Integrated Circuit Design ^{2, 3}	
E C E 542	Introduction to Microelectromechanical Systems ^{2, 3}	
PHYSICS 551	Solid State Physics ³	
M S & E 553	Nanomaterials & Nanotechnology (offered in Spring) ^{3, 5}	
E C E 555	Digital Circuits and Components ^{2, 3}	
Total Credits		20

- ² This course can be taken as an Advanced Elective in Circuits & Devices.
³ This course can be taken as a Professional Elective.
⁴ This course can be taken as an Advanced Elective in Fields and Waves.
⁵ This course has additional requisites not required for the BS in Electrical Engineering.

¹ This course can be taken as an Advanced Elective - Laboratory.