

Electrical Engineering Graduate Program Course Planning

Earning the certificate: To complete the [Electrical Engineering Graduate Program](#), you must complete a total of four courses, a minimum of two EE courses need to be completed. You must receive a B (3.0) or better in each course in order to continue taking courses via the Non-Degree Option Program.

Completion time: up to 3 academic years | recommended minimum 15-20 hours per week on course work

General Prerequisites: Before beginning, you should have a conferred Bachelor's degree in science or engineering with an undergraduate GPA of 3.0 or better. Each course may have individual prerequisites. You can find more detailed information about each course via the course webpage on [Stanford Online](#).

Circuits

Schedule is subject to change

COURSE NAME & NUMBER	PREREQS	UNITS	AUTUMN	WINTER	SPRING	SUMMER
Fundamentals of Analog Integrated Circuit Design EE214A		3-4	Online			
Advanced Integrated Circuit Design EE214B	EE214A	3		Online		
Principles and Models of Semiconductor Devices EE216		3	Not offered AY22-23			
Introduction to VLSI Systems EE271		3	Online			
Design Projects in VLSI Systems I EE272		3		Online		
Digital Systems Engineering EE273		3		Not offered AY22-23		
Autonomous Implantable Systems EE303		3			Online	
Advanced Integrated Circuits Technology EE311	EE216	3			Not offered AY22-23	
Analog-Digital Interface Circuits EE315	EE214B	3	Online			
Advanced VLSI Devices EE316	EE216	3			Online	

Communications and Networking

Schedule is subject to change

COURSE NAME & NUMBER	PREREQS	UNITS	AUTUMN	WINTER	SPRING	SUMMER
Introduction to Digital Communication EE279		3		Not offered AY22-23		
Wireless Communications EE359		3	Not offered AY22-23			
Digital Communication EE379		3		Online		

Software and Hardware Systems

Schedule is subject to change

COURSE NAME & NUMBER	PREREQS	UNITS	AUTUMN	WINTER	SPRING	SUMMER
Artificial Intelligence: Principles and Techniques CS221		4	Online		Online	
Probabilistic Graphical Models: Principles and Techniques CS228		4		Online		
Machine Learning CS229		4	Online	Online	Online	TBD
Computer Vision: From 3D Reconstruction to Recognition CS231A		4		Online		
Convolutional Neural Networks for Visual Recognition CS231N	CS229	4			Online	
Advanced Topics in Operating Systems CS240		3			Online	
Program Analysis and Optimizations CS243		4		TBD		
Principles of Data-Intensive Systems CS245		3		Online		
Mining Massive Data Sets CS246		4			Online	
Interactive Computer Graphics CS248		4		Online		
Introduction to Cryptography CS255		4		Online		
Digital Systems Engineering EE273		3		Not Offered AY22-23		
Computer Systems Architecture EE282		3		Online		
Introduction to the Internet of Things EE284A		3			Online	

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Physical Technology and Science

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COURSE NAME & NUMBER	PREREQS	UNITS	AUTUMN	WINTER	SPRING	SUMMER
Integrated Circuit Fabrication Processes EE212		3	Online			
Principles and Models of Semiconductor Devices EE216		3	Not offered AY22-23			
Biochips and Medical Imaging EE225		3		Online		
Autonomous Implantable Systems EE303		3			Online	
Intro to Micro and Nano Electromechanical Systems ENGR240		3		Online		

Signal Processing, Control, and Optimization

Schedule is subject to change

COURSE NAME & NUMBER	PREREQS	UNITS	AUTUMN	WINTER	SPRING	SUMMER
Decision Making Under Uncertainty AA228		3-4		Online		
The Fourier Transform and Its Applications EE261		3	Online			TBD
Introduction to Linear Dynamical Systems EE263		3	Online			TBD
Digital Signal Processing EE264		3-4		Not offered AY22-23		
Introduction to Statistical Signal Processing EE278	EE261	3	Online			
Convex Optimization I EE364A	EE263	3		Online		TBD
Computational Imaging EE367		3		Online		
Digital Image Processing EE368		3		Not offered AY22-23		
Medical Imaging Systems II EE369B	EE261	3		Online		
Introduction To Control Design Techniques ENGR205		3	Online			
Optimization MS&E311		3			TBD	

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Image Systems Engineering
PSYCH221

EE261

1-3

Online

Modern Applied Statistics: Data Mining
STATS315B

3

Online