

Choose 12 hours of approved electives:

Only 3 hours may come from areas other than CPE, EE, or CS

Courses offered based on historical data, does not guarantee future availability.

Course Number	Cr Hrs	Course Title	Prerequisite	Offered: F=Fall S=Spr M=Sum
Computer Engineering				
CPE 412	3	Intro to Parallel Programming	CPE 212, CS 317	F
CPE 423	3	Hardware/Software Co-Design	CPE 322, CPE 426	F
CPE 426	3	VLSI Hardware Desc Lang/Mod/IS	EE 202, EE 315	S
CPE 427	3	VLSI Design I	EE 202, EE 315; Coreq: CPE 427L	F
CPE 436	3	Internals of Modern Operating Systems	CPE 434	
CPE 449	3	*Intro to Cybersecurity Engineering	CPE 348	F
CPE 455	3	Secure Software Development	CPE 353 or CS 307	S
CPE 457	3	Software Reverse Engineering	CPE 353 or CS 307	F
CPE 459	3	Systems Security	CPE 348, CPE 449	S
CPE 486	3	Machine Learning for EGR Applications	EGR 101, MA 244, EE 385 or ISE 390	F
CPE 487	3	Deep Learning for Engineering Applications	CPE 486	S
CPE 490	3	Special Topics in Computer Engineering	Advisor Approval	
CPE 499	3	Project in Computer Engineering	Advisor Approval	

Course Number	Cr Hrs	Course Title	Prerequisite	Offered: F=Fall S=Spr M=Sum
Computer Science				
CS 321	3	Object Oriented Programming Java	CS 221 or CPE 212	FS
CS 330	3	Artificial Intelligence & Game Development	CS 221 or CPE 212	S
CS 347	3	Intro Video Game Design & Programming	CS 221 or CPE 212	FS
CS 371	3	Mobile Computing Application Inct & Desn	CS 221 or CPE 212	F
CS 391	3	Intro Network Admin Principles for Windows	CS 221 or CPE 212	
CS 392	3	Intro Network Admin Principles for Unix	CS 390	
CS 396	3	Special Topics in Computer Science	Advisor Approval	
CS 403	3	Intro Formal Language & Automata Theory	CS 317	
CS 424	3	Programming Languages	CS 317	FSM
CS 430	3	Survey of Artificial Intelligence	CS 317	FS
CS 443	3	Intro to Multimedia Systems	CS 317	
CS 445	3	Intro to Computer Graphics	CPE 212, (MA 244 or CS 217)	FS
CS 453	3	Client/Server Architectures	CS 307 or CS 321	F
CS 454	3	Intro to Cloud Computing	CPE 348, (CS 307, 321 or CPE 353)	FS
CS 465	3	Network Security	CPE 221, CPE 348	FSM
CS 466	3	Offensive Security	CPE 348	
CS 480	3	Mobile Digital Foensics	CS 413 or CPE 323	FS
CS 485	3	*Intro to Cybersecurity Engineering	CPE 348	FS
CS 487	3	Database Systems	Senior Standing	F
CS 488	3	Intro to Big Data Computing	CS 317	FS
CS 496	3	Special Topics in Computer Science	Advisor Approval	

*CPE 449 and CS 485 are equivalent courses. Both cannot be taken for credit

Course Number	Cr Hrs	Course Title	Prerequisite	Offered: F=Fall S=Spr M=Sum
Electrical Engineering				
EE 307	3	Electricity and Magnetism	PH 112, MA 201, EE 213	FSM
EE 308	3	Electromagnetic Engineering	EE 307	FS
EE 386	3	Introduction to Control and Robotic Systems	CPE 381 or EE 382	FSM
EE 401	3	Real-Time Signal Process	EE 383 or CPE 381	
EE 410	3	Special Topics for Electrical Engineering	Advisor Approval	
EE 411	3	Electric Power Systems	EE 382 or CPE 381	S
EE 414	3	Analog & Digital Filter Design	EE 315 and (EE 383 or CPE 381)	S
EE 416	3	Electronics II	EE 315	SM
EE 424	3	Intro to Data Communication Networks	(EE 383 or CPE 381) and EE 385	F
EE 426	3	Communication Theory	EE 382 or CPE 381	S
EE 436	3	Digital Electronics	EE 202 and EE 315	F
EE 451	3	Optoelectronics	EE 307 and EE 315	F
EE 453	3	Laser Systems (OPE 453)	EE 307	F
EE 454	3	Optical Fiber Communications (OPE 454)	EE 307 and CPE 381	S
EE 486	3	Intro to Modern Control Systems	EE 386	F

Course Number	Cr Hrs	Course Title	Prerequisite	Offered: F=Fall S=Spr M=Sum
Industrial & Systems Engineering				
ISE 340	3	Operations Research	ISE 390, MA 244	F
ISE 391	3	Probability & Engineering Statistics II	ISE 390	S
ISE 423	3	Intro to Statistical Quality Control	ISE 391	S
ISE 426	3	Design & Analysis of Experiments	ISE 391	S
ISE 430	3	Manufacturing Systems & Facility Design	ISE 324	F
ISE 447	3	Intro to Systems Simulations	EGR 101, ISE 391	F

Course Number	Cr Hrs	Course Title	Prerequisite	Offered: F=Fall S=Spr M=Sum
Mathematics				
MA 385	3	Intro to Probability & Statistics	MA 201	FSM
MA 415	3	Intro to Numerical Methods	MA 201, MA 244, CPE 211	
MA 442	3	Algebraic Structures with Applications	MA 244, (MA 330 or MA 385)	FSM
MA 450	3	Combinational Enumeration	MA 385	F
MA 452	3	Intro to Real Analysis	MA 330	FS
MA 456	3	Methods of Partial Differential Equations	MA 238, MA 244	
MA 458	3	Applied Linear Algebra	MA 238, MA 244	FS
MA 460	3	Intro Fourier Analysis	MA 238, MA 244	F
MA 465	3	Intro to Math Modeling	MA 201, MA 238, MA 244	FS
MA 487	3	Intro to Math Statistics	MA 201, (MA 385 or ISE 390)	FS

Course Number	Cr Hrs	Course Title	Prerequisite	Offered: F=Fall S=Spr M=Sum
Information Systems				
IS 463	3	Computer Forensics	IS 301	F

Course Number	Cr Hrs	Course Title	Prerequisite	Planned Term
Selected Computer Engineering Electives - 12 hours				
	3			
	3			
	3			
	3			

Note: No ET (Engineering Technology) courses can be used for elective credits.