

Electrical & Electronic Engineering - ELECTIVE LIST (Effective Fall 2013)

AREA 1: Analog/Digital Electronics	AREA 2: Control Systems	AREA 3: Communication Engineering	AREA 4: Power Engineering	OTHER ***
EEE 109 - *+Electronics II (4) Prereqs: EEE 108, 108L, 117, 117L	EEE 187 - Robotics (4) Prereqs: EEE 180 or equivalent, or instructor permission	EEE 162 - Applied Wave Propagation (3) Prereqs: EEE 117, EEE 161	EEE 131 - +Electromechanics Lab (1) Prereqs: EEE 117, EEE 130; EEE 130 may be taken concurrently	EEE 120 - Electronic Instrumentation (4) Prereqs: EEE 108, EEE 117; 108 may be taken concurrently
EEE 110 - Advanced Analog IC (3) Prereq: EEE 109 or Instructor Permission	EEE 188 - +Digital Control Systems (3) Prereqs: EEE 180	EEE 163 - +Traveling Waves Lab (1) Prereqs: EEE 117, EEE 162; EEE 162 may be taken concurrently	EEE 141- ** Power System Analysis (3) Prereq: EEE 130 (may be taken concurrently)	EEE 122 - Applied Digital Signal Processing (3) Prereqs: EEE 117, EEE 180
EEE 111 - Adv. Analog IC Lab (1) Prereqs: EEE 109; either EEE 110 or EEE 230 may be taken concurrently	EEE 189 - +Controls Lab (1) Prereqs: EEE 184; may be taken concurrently	EEE 165 - Intro. To Optical Engineering (3) Prereqs: EEE 161, EEE 180, EEE 185; 185 may be taken concurrently	EEE 142 - Energy System Control (3) Prereq: EEE 130, EEE 141, EEE 184	EEE 135-Renewable Electrical Energy Sources & Grid Integration (3) Prereq: EEE 130
EEE 166 - Physical Electronics (3) Prereqs: EEE 108	EEE 178 - Intro. to Microprocessors Prereqs: EEE 180 or ME 172, or Instructor approval	EEE 167 - +Electro-Optical Engr. Lab (1) Prereqs: EEE 161, EEE 165, EEE 180; EEE 165 may be taken concurrently	EEE 143 - **+Power System Lab (1) Prereqs: EEE 130, EEE 141	EEE 136 - Smart Electric Power Grid (3) Prereq: EEE 142 or EEE 144
CpE 138 - Computer Network & Internet (3) Prereqs: CSC 35, CSC 60, CSC 130		EEE 181 - Intro. To Digital Signal Processing (3) Prereqs: EEE 64, EEE 180	EEE 144 - Electric Power Distrib. (3) Prereq: EEE 130	EEE 147 - Power Sys. Op. & Control Lab (1) Prereq: EEE 141
CpE 151 - CMOS & VSLI (3) Prereqs: CpE/EEE 64, EEE 108, EEE 108L		EEE 182 - Digital Signal Processing Lab (1) Prereqs: EEE 180, EEE 181; EEE 181 may be taken concurrently	EEE 145 - Power System Relay Protection (3) Prereqs: EEE 141	EEE 178 - Introduction to Machine Vision (3) Prereq: EEE 180 or ME 172
CpE 153 - VSLI Design (3) Prereq: CPE 151		EEE 183- Digital Comun. Sys. Dsgn (3) Prereqs: EEE 161, EEE 180, EEE 185; EEE 185 may be taken concurrently	EEE 146 - Power Elect. Control Drives (3) Prereqs: EEE 108, EEE 130	
CpE 166 - Advanced Logic Design (4) Prereqs: EEE 64, ENGR 17		EEE 186 - +Communication Sys Lab (1) Prereqs: EEE 117, EEE 185 may be taken concurrently	EEE 147 - Power system Operation and Control Lab Prereqs: EEE 141	
CPE 186- Computer Hardware Design (3) Prereqs: CpE 185 or EEE 174		PHYS 106 - Intro. To Modern Physics (3) Prereqs: Math 31; Phys 11A, 11B, 11C or Phys 5A, 5B	EEE 148 - Power Electronics Lab (1) Prereqs: EEE 146 (may be taken concurrently)	
CpE 187 - +Embedded Process. Syst. Design (2) Prereqs: CpE 166, CpE 185, EEE 102		PHYS 130 - Acoustics (3) Prereqs: Math 45, Phys 11A, Phys 11B, Phys 11C		

EEE Electives:

- ❖ Students planning to complete EEE 193A/EEE 193B series must complete 7 units of depth electives + 6 units of electives from any area.
- ❖ Students planning to complete EEE 193A/EEE 193B series must complete 7 units of depth electives + 3 units of electives from any area.
- ❖ Students planning to complete EEE 193A/EEE 193B series may not use EEE 109 to meet depth/elective requirement
- ❖ Students planning to complete EEE 192A/EEE 192B series may not use EEE 141, EEE 142 and EEE 143 to meet depth/elective requirement.
- ❖ Check with your advisor to see if any of the classes listed below can be counted as an elective in your program of study
- ❖ + WPJ Score of 70+ OR ENGL 109W/M required

Required Lower Division Courses				Required Upper Division Courses				Required Design Project Series			
Chem	1E	General Chemistry for Engineers Prereq H.S. chemistry; Math 30 or eligibility to take MATH 30 passing score on a standardized Chemistry diagnostic exam given prior to each semester, or minimum grade of "C" in CHEM 4	4	EEE	108	Electronics I Prereq EEE 117; Coreq EEE 108L	3	EEE	141	POWER – Electrical Power Design Project Power System Analysis Prereq EEE 117 and EEE 161	3
EEE/ CpE	64	Intro. to Logic Design Prereq CSC 15 or CSC 25 or ENGR 50	4	EEE	108L	Electronics I Lab Prereq EEE 117, EEE 117L; Coreq EEE 108	1	EEE	142	Power System Analysis II Prereq EEE 130, EEE 141, and EEE 184	
Engl	20	College Composition II Prereq Engl 5 or Engl 5M	3	EEE	117	Network Analysis Prereq Engr 17, Math 45, Phys 11C; Coreq EEE 117L	3	EEE	143	+ Power System Laboratory Prereq EEE 130, EEE 141	1
ENGR	1 (96A)	Introduction to Engineering Prereq Algebra & Trigonometry or Instructor Permission	1	EEE	117L	Network Analysis Lab Coreq EEE 117	1	EEE	192A	+Electrical Power Design Project I Prereq EEE 143 may be taken concurrently and any two of the following are needed: EEE 141, EEE 142, or EEE 144	2
ENGR	17	Introductory Circuit Analysis Prereq Math 45, Phys 11C; either can be taken concurrent, but not both	3	EEE	130	Electromechanical Conversion Prereq EEE 117 and EEE 161	3	EEE	192B	Electrical Power Design Project II Prereq EEE 192A, EEE 142, EEE 144; EEE 142 or EEE 144 may be taken concurrently--but not both	2
ENGR	50	Computational Methods & Apps. Prereq Math 30, Phys 11A; Phys 11A may be taken concurrently	3	EEE	161	Applied Electromagnetics Prereq Math 32, Math 45, Phys 11C, Engr 17, and CSC 25	4	ELECTRONICS - Product Design Project			
Math	30	Calculus I Prereq 76+ ALEKS PPL score or Math 29	4	EEE	174	Introduction to Microprocessors Prereq EEE 64; Junior status	4	EEE	109	+ Electronics II Prereq EEE 108, EEE 108L, EEE 117, EEE 117L,	4
Math	31	Calculus II Prereq Math 30	4	EEE	180	Signals and Systems Prereq EEE 117; may be taken concurrently	3	EEE	193A	+Product Design Project I Prereq EEE 108, EEE 109, EEE 130, EEE 161, EEE 174, EEE 180; EEE 109 may be taken concurrently	2
Math	32	Calculus III Prereq Math 31	4	EEE	184	Introduction to Feedback Systems Prereq EEE 180	3				
Math	45	Differential Equations Prereq Math 31	3	EEE	185	Modern Communication Systems Prereq EEE 180, Engr 120; Engr 120 may be taken concurrently	3	EEE	193B	Product Design Project II Prereq EEE 193A	2
Phys	11A	General Physics: Mechanics Prereq Math 30, Math 31 - Math 31 can be taken concurrently	4	ENGR	120	Probability and Random Signals Prereq EEE 180; may be taken concurrently	3				
Phys	11C	General Physics: Electricity & Magnet. Prereq Math 31, Phys 11A	4	ENGR	140	Engineering Economics Prereq ENGR 17 (EEE students do not need ENGR 30)	2	NOTE	+ WPJ Score of 70+ OR ENGL 109W/M required		