

Technical Electives for BSEE

Group I: Electrical Engineering Technical Electives: An Electrical Engineering student is required to take two courses from **Group I**.

Course No.	Course Title	Cr	Pre- and Co-requisites
ECE 30300	Engineering Software Design	3	P: ECE22900
ECE 32400	Introduction to Energy Systems	3	P: ECE 25500, PHYS 25100, C: ECE 20800
ECE 47800	Robotics and Automation	3	P: ECE 36200, PHYS 15200, CS 22900, MA 36300
ECE 46500	Embedded Microprocessors	3	P: ECE 36200
ECE 47400	Introduction to RF Circuit Design	3	P: PHYS 25100, ECE 25500
ECE 48300	Digital Control Systems Analysis and Design	3	P: ECE 30100 or ME 33300
ECE 54700	Introduction to Computer Comm. Network	3	P: ECE 30200

*All Electrical Engineering Technical Electives have design content. ECE 49500 can be counted as a Group I technical elective upon the approval by the EE curriculum committee. Other ECE 5xx courses may be included in this group upon the approval by the EE curriculum committee. A course cannot be counted toward both an undergraduate degree and a graduate degree.

Group II: Other Technical Electives: An Electrical Engineering student is required to take two courses from **Group II**.

Course No.	Course Title	Cr	Pre- and Co-requisites
ECE 35800	Introduction to VHDL	3	P: ECE 27000, CS 22900
ECE 36800	Data Structures	3	P: CS 22900
ECE 43700	Computer Design and Prototyping	4	P: ECE 35800 & 36200
ECE 48500	Embedded Real-Time Operating Sys.	4	P: ECE 36200 & 36800
SE 52000* or SE 54000*	Engineering Economics or System Architecture	3	P: Senior or graduate standing
SE 53000* or SE 55000*	Engineering Management or Advanced Manufacturing Systems & Processes	3	P: Senior or graduate standing
CS 32100	Computer Graphics	3	P: CS Department approval
CS 36000	Software Engineering	4	P: CS Department approval
MA 17500* or MA 27500*	Introductory Discrete Math or Intermediate Discrete Math	3	P: MA 16500 or 15300 & CS 16000, or MA 15300 & EET 26400 with grade of C or better in each course; MA 26100
PHYS 32200	Optics	3	P: PHYS 25100
PHYS 32500	Scientific Computing	3	P: PHYS20500 or ECE30300
PHYS 34200	Modern Physics	3	P: PHYS 25100

* Either of the two courses, but not both.

+ECE 49600, ECE 49700, and ECE 49800 can be counted as Group II technical electives, with the maximum of 3 credit hours each, upon the approval by the EE curriculum committee. A student with a major in Electrical Engineering who takes either MA 17500 or MA27500 can earn a minor in Mathematics. A student with a major in Electrical Engineering who takes both PHYS 32200 and PHYS 34200 can earn a minor in Physics.

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