

ELECTRICAL ENGINEERING MAJOR, B.S.

Course	Title	Credits
General Requirements		
General Education (https://catalog.uwplatt.edu/undergraduate/degree-requirements/bachelor-of-science-degree-core-curriculum/)		
Mathematics Courses		
MATH 2640	Calculus and Analytic Geometry I	4
MATH 2740	Calculus and Analytic Geometry II	4
MATH 2840	Calculus and Analytic Geometry III	4
MATH 3630	Differential Equations I	3
Basic Sciences Courses		
CHEMISTRY 1450	Chemistry for Engineers	5
PHYSICS 2240	General Physics I	4
PHYSICS 2340	General Physics II	4
PHYSICS 3140	Modern Physics	4
Other Courses		
INDSTENG 3730	Engineering Management	3
GENENG 1030	Introduction to Engineering Projects	1
GENENG 2820	Engineering Economy	2
COMPUTER 1430	Introduction to Computer Programming	3
ENERGY 2130	Energy, Environment, and Society	3
Electrical Engineering Required Courses		
ELECTENG 1020	Electrical Engineering Projects and Tools	1
ELECTENG 1210	Circuit Modeling I	3
ELECTENG 2210	Circuit Modeling II	4
COMPENG 2780	Logic and Digital Design	4
ELECTENG 3220	Signals and Systems	4
ELECTENG 3020	Analog Electronics	4
ELECTENG 3140	Electric and Magnetic Fields	3
ELECTENG 3210	Engineering Computation	3
ELECTENG 4930	Senior Design	3
Electrical Engineering Professional Emphasis Electives		
Select one of the following emphases ¹		24
Total Credits		97

¹ Each student shall complete a total of 24 credits from the list below. At least two of the courses must come from the following list of culminating design experience courses: ELECTENG 4260*, ELECTENG 4350*, ELECTENG 4450*, COMPENG 4720*. Each student shall have at least one emphasis as defined in the divisions below. The emphasis is completed by taking 4 credits at the 4000-level in the chosen emphasis beside the culminating design experience course of the emphasis listed above. ELECTENG 4940, ELECTENG 4980, or ELECTENG 4990 should be approved by the department and no more than 4 credits of them may be used to complete the required 24 credits.

COMMUNICATIONS AND ELECTRONICS EMPHASIS

Course	Title	Credits
Required Courses		
ELECTENG 4260	Measurements and Instrumentation *	4
Select 4 credits from the following:		4
ELECTENG 4060	Electronic Communications	
ELECTENG 4430	Power Electronics	
ELECTENG 4940	Undergraduate Research	
ELECTENG 4980	Current Topics in Engineering	
ELECTENG 4990	Independent Study	

COMPUTER ENGINEERING EMPHASIS

Course	Title	Credits
Required Courses		
COMPENG 3780	Computer Architecture	4
COMPENG 4720	Computer Organization and Design *	4
Select 4 credits from the following:		4
COMPENG 4320	Digital Signal Processing	
COMPENG 4750	Advanced Digital Design	
ELECTENG 4940	Undergraduate Research	
ELECTENG 4980	Current Topics in Engineering	
ELECTENG 4990	Independent Study	

CONTROLS EMPHASIS

Course	Title	Credits
Required Courses		
ELECTENG 3320	Automatic Controls	4
ELECTENG 4350	Discrete Time Control Systems *	4
Select 4 credits from the following:		
ELECTENG 4310	Modern Control Systems	
ELECTENG 4360	Intelligent Control	
ELECTENG 4940	Undergraduate Research	
ELECTENG 4980	Current Topics in Engineering	
ELECTENG 4990	Independent Study	

POWER AND ENERGY EMPHASIS

Course	Title	Credits
Required Courses		
ELECTENG 3410	Introduction to Electrical Machines and Power Systems	4
ELECTENG 4450	Power Systems Analysis and Design *	4
Select 4 credits from the following:		4
ELECTENG 4430	Power Electronics	
ELECTENG 4440	Electric Motor Drives	
ELECTENG 4940	Undergraduate Research	
ELECTENG 4980	Current Topics in Engineering	
ELECTENG 4990	Independent Study	

* Denotes required culminating design experience course.