

# ELECTRICAL ENGINEERING MAJOR, B.S.

Course	Title	Credits
<b>General Requirements</b>		
General Education ( <a href="http://catalog.uwplatt.edu/undergraduate/degree-requirements/bachelor-of-science-degree-core-curriculum/">http://catalog.uwplatt.edu/undergraduate/degree-requirements/bachelor-of-science-degree-core-curriculum/</a> )		
<b>Mathematics Courses</b>		
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
<b>Basic Sciences Courses</b>		
CHEMSTRY 1450	Chemistry for Engineers	5
PHYSICS 2240	General Physics I	4
PHYSICS 2340	General Physics II	4
PHYSICS 3140	Modern Physics	4
<b>Other Courses</b>		
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
<b>Electrical Engineering Required Courses</b>		
ELECTENG 1020	Electrical Engineering Projects and Tools	1
ELECTENG 1210	Circuit Modeling I	3
ELECTENG 2210	Circuit Modeling II	4
ELECTENG 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 3900	Introduction to Engineering Systems Design	2
ELECTENG 4900	Senior Design I	1
ELECTENG 4930	Senior Design II	3
<b>Electrical Engineering Professional Emphasis Electives</b>		
Select one of the following emphases <sup>1</sup>		24
<b>Total Credits</b>		<b>97</b>

<sup>1</sup> 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, ELECTENG 4750. Each student shall have at least one emphasis as defined in the divisions below. The emphasis is completed by taking 4 more credits at the 4000-level in the chosen emphasis. No more than 4 credits of independent study or undergraduate research may be used to complete the required 24 credits.

## COMMUNICATIONS AND ELECTRONICS EMPHASIS

Course	Title	Credits
<b>Required Courses</b>		
ELECTENG 4260	Measurements and Instrumentation	4
Select one of the following		4
ELECTENG 4060	Electronic Communications	
ELECTENG 4430	Power Electronics	

## COMPUTER ENGINEERING EMPHASIS

Course	Title	Credits
<b>Required Courses</b>		
ELECTENG 3780	Computer Architecture	4
ELECTENG 4720	Computer Organization and Design	4
Select one of the following		4
ELECTENG 4320	Digital Signal Processing	
ELECTENG 4750	Advanced Digital Design	

## CONTROLS EMPHASIS

Course	Title	Credits
<b>Required Courses</b>		
ELECTENG 3320	Automatic Controls	4
ELECTENG 4350	Discrete Time Control Systems	4
Select one of the following		4
ELECTENG 4310	Modern Control Systems	
ELECTENG 4360	Intelligent Control	

## POWER AND ENERGY EMPHASIS

Course	Title	Credits
<b>Required Courses</b>		
ELECTENG 3410	Introduction to Electrical Machines and Power Systems	4
ELECTENG 4450	Power Systems Analysis and Design	4
Select one of the following		4
ELECTENG 4430	Power Electronics	
ELECTENG 4440	Electric Motor Drives	