

SUSTAINABILITY AND RENEWABLE ENERGY SYSTEMS (SRES) MAJOR, B.S.

Course	Title	Credits
General Requirements		
General Education (http://catalog.uwplatt.edu/undergraduate/degree-requirements/bachelor-of-science-degree-core-curriculum/)		22
Energy Core ¹		
ECONOMIC 2130	Principles of Macroeconomics	3
ACCTING 2010	Financial Accounting	3
BUSADMIN 2100	Supply Chain Management	3
ENGLISH 3000	Technical Writing	3
or BUSADMIN 2010	Business Communication	
AGBUS 1500	Introduction to Agribusiness	3
or BUSADMIN 2330	Leadership and Management	
GEOGRPHY 3330	Environmental Conservation	3
or ENERGY 3130	Sustainability: Ecology, Resources and Practice	
ENERGY 2130	Energy, Environment, and Society	3
ENERGY 2340	Fundamentals of Energy Sources	4
ENERGY 3230	Biorenewable Resources	3
ENERGY 3330	Electrical Energy Systems and Energy Storage	3
ENERGY 3430	Green Building Design	3
ENERGY 3580	Principles of Project Management and Sustainable Development	3
ENERGY 3950	Sustainability and Renewable Energy Systems Cooperative Education	1-2
or ENERGY 3970	Sustainability and Renewable Energy Systems Internship	
ENERGY 4620	Data Analysis and Verification Tools	3
ENERGY 4920	Senior Design Project	3
Advanced ENERGY Courses ¹		
Select three of the following courses:		10-11
ENERGY 4130	Sustainability Policy and Practice	
ENERGY 4230	Biofuels	
ENERGY 4330	Wind and Solar Systems Design	
ENERGY 4430	Building Energy Management	
Emphasis		
Select one of the following emphases		
Total Credits		76-78

¹ All ENERGY courses require a C- or better grade to satisfy major requirements.

DEVELOPMENT AND MANAGEMENT EMPHASIS

Course	Title	Credits
Required Courses		
MATH 1830	Elementary Statistics	3
MATH 1920	Finite Mathematics with Applications	3-4
or MATH 2640	Calculus and Analytic Geometry I	
Select one of the following options:		5-8
Option 1:		
CHEMISTRY 1050	Survey of General Chemistry	
Option 2:		

CHEMSTRY 1140 & CHEMSTRY 1240	General Chemistry I and General Chemistry II	
Option 3:		
CHEMSTRY 1450	Chemistry for Engineers	
Select one of the following options:		8-10
Option 1:		
PHYSICS 1350 & PHYSICS 1450	Introductory Physics I and Introductory Physics II	
Option 2:		
PHYSICS 2240 & PHYSICS 2340	General Physics I and General Physics II	
ACCTING 2020	Management Accounting	3
AGBUS 2430 or BUSADMIN 2630	Agricultural Marketing Introduction to Marketing	3
BUSADMIN 3620	Corporate Finance	3
ECONOMIC 2230	Principles of Microeconomics	3
Emphasis Electives ^{1,2,3}		12
Total Credits		43-49

¹ Requires at least 12 credits (of which at least 6 credits must be in 3000 or 4000 level) from the following subjects will count as an Emphasis Elective: ENERGY, AGBUS, AGET, BIOLOGY, BUSADMIN, CHEMSTRY, CIVILENG, ECORES, ELECTENG, ENGRPHYS, ENVENG, ENVHORT, GEOGRPHY, INDSTENG, INDUSTDY, MECHENG, POLISCI, SCSCI, or SEJ.

² Electives cannot double count for major or other emphasis requirements.

ENERGY SYSTEMS ENGINEERING TECHNOLOGY EMPHASIS

Course	Title	Credits
Required Courses		
MATH 2640	Calculus and Analytic Geometry I	4
MATH 2740	Calculus and Analytic Geometry II	4
MATH 4030	Statistical Methods with Applications	3
Select one of the following options:		5-8
Option 1:		
CHEMSTRY 1450	Chemistry for Engineers	
Option 2:		
CHEMSTRY 1140 & CHEMSTRY 1240	General Chemistry I and General Chemistry II	
PHYSICS 2240 & PHYSICS 2340	General Physics I and General Physics II	8
GENENG 1320 or GENENG 2030	Engineering Computer Graphics Engineering Modeling and Design	2-3
GENENG 2130	Engineering Mechanics-Statics	3
GENENG 2230	Engineering Mechanics-Dynamics	3
MECHENG 2630	Thermodynamics	3
GENENG 2820	Engineering Economy	2
GENENG 2930 or ELECTENG 2210	Applications of Electrical Engineering Circuit Modeling II	3-4
Emphasis Electives ^{1,2}		3
Total Credits		43-48

¹ Any 3000 or 4000 level course from the following subjects will count as an Emphasis Elective: ENERGY, AGBUS, AGET, BIOLOGY, BUSADMIN, CHEMSTRY, CIVILENG, ECORES ELECTENG, ENGRPHYS, ENVENG, ENVHORT, GEOGRPHY, INDSTENG, INDUSTDY, MECHENG, POLISCI, SCSCI, or SEJ.

² Electives cannot double count for major or other emphasis requirements.

BIOENERGY AND SUSTAINABLE LAND USE EMPHASIS

Course	Title	Credits
Required Courses		
MATH 1830	Elementary Statistics	3
MATH 1920 or MATH 2640	Finite Mathematics with Applications Calculus and Analytic Geometry I	3
Select one of the following options: (5-8 credits)		5-8
Option 1:		
CHEMISTRY 1050	Survey of General Chemistry	
Option 2:		
CHEMISTRY 1140 & CHEMISTRY 1240	General Chemistry I and General Chemistry II	
Option 3:		
CHEMISTRY 1450	Chemistry for Engineers	
PHYSICS 1350 & PHYSICS 1450 or PHYSICS 2240 & PHYSICS 2340	Introductory Physics I and Introductory Physics II General Physics I and General Physics II	8-10
ECORES 1010	Introduction to Ecological Restoration and Resource Management	3
SCSCI 1240	Introduction to Plant Science	3
AGET 1750	Equipment, Structure and Power Systems	3
SCSCI 2230	Soils	4
SCSCI 2260	Crop Production and Agroecology	3
ECORES 3880	Environmental Law	3
AGET 3950 or SCSCI 4350	Soil and Water Conservation Engineering Soil and Water Conservation	3
Emphasis Electives ^{1,2}		3
Total Credits		44-49

¹ Any 3000 or 4000 level course from the following subjects will count as an Emphasis Elective: ENERGY, AGBUS, AGET, BIOLOGY, BUSADMIN, CHEMISTRY, CIVILENG, Ecores, ELECTENG, ENGRPHYS, ENVENG, ENVHORT, GEOGRPHY, INDSTENG, INDUSTDY, MECHENG, POLISCI, SCSCI, or SEJ.

² Electives cannot double count for major or other emphasis requirements.

GREEN BUILDING AND ENERGY MANAGEMENT EMPHASIS

Course	Title	Credits
MATH 1830	Elementary Statistics	3
MATH 1920 or MATH 2640	Finite Mathematics with Applications Calculus and Analytic Geometry I	3
Select one of the following options: (5-8 credits)		5-8
Option 1:		
CHEMISTRY 1050	Survey of General Chemistry	
Option 2:		
CHEMISTRY 1140 & CHEMISTRY 1240	General Chemistry I and General Chemistry II	
Option 3:		
CHEMISTRY 1450	Chemistry for Engineers	
Select one of the following options (8-10 credits)		8-10
Option 1:		

PHYSICS 1350 & PHYSICS 1450	Introductory Physics I and Introductory Physics II	
Option 2:		
PHYSICS 2240 & PHYSICS 2340	General Physics I and General Physics II	
INDUSTDY 1010	Principles of Safety and Risk Management	3
INDUSTDY 1100	Introduction to the Construction Industry	3
INDUSTDY 1300	Construction Computer Applications	3
INDUSTDY 2430	Building Construction Materials	3
INDUSTDY 3140	General Construction Estimating	3
INDUSTDY 4530	Commercial Planning and Design	3
INDUSTDY 4630	Building Systems Analysis	3
Emphasis Electives ^{1,2}		3
Total Credits		43-48

¹ Any 3000 or 4000 level course from the following subjects will count as an Emphasis Elective: ENERGY, AGBUS, AGET, BIOLOGY, BUSADMIN, CHEMISTRY, CIVILENG, ECORES, ELECTENG, ENGRPHYS, ENVENG, ENVHORT, GEOGRPHY, INDSTENG, INDUSTDY, MECHENG, POLISCI, SCSCI, or SEJ.

² Electives cannot double count for major or other emphasis requirements.