

Curriculum for Bachelor of Science in Environmental Resources Engineering
Department of Environmental Resources Engineering, SUNY ESF (Rev Date 1/10/2012)

Our Mission:

Engage in teaching, research, and service to advance engineering practices to meet the needs of the world

<u>FALL</u>			<u>SPRING</u>		
FRESHMAN YEAR					
APM 205	Calculus I	4	APM 206	Calculus II	4
FCH 150	General Chemistry I	3	FCH 152	General Chemistry II	3
FCH 151	General Chemistry I Laboratory	1	FCH 153	General Chemistry II Lab	1
EFB 101	General Biology 1	3	PHY 211	General Physics I	3
EFB 102	General Biology 1 Laboratory	1	PHY 221	General Physics I Laboratory	1
ERE 132	ERE Orientation	1	ERE 133	Intro to Engineering Design	3
EWP 190	Writing and the Environment	3	Gen Ed	General Education Elective	3
Curricular Total = 16 / Semester Total =		16	Curricular Total = 34 / Semester Total =		18
SOPHOMORE YEAR					
APM 397	Calculus III	4	APM 485	Differential Eqns - Engineers / Sci	3
PHY 212	General Physics II	3	ERE 275	Intro Ecological Engineering	3
PHY 222	General Physics II Laboratory	1	GNE 273	Mechanics of Materials	3
FOR 321	Forest Ecology and Silviculture	3	EWP 290	Research Writing & Humanities	3
GNE 172	Statics and Dynamics	4	Gen Ed	General Education Elective	3
Gen Ed	Earth-Science Gen Ed Elective*	3			
Curricular Total = 52 / Semester Total =		18	Curricular Total = 67 / Semester Total =		15
JUNIOR YEAR					
ERE 496	Fluid Mechanics	4	ERE 340	Engr Hydrology & Hydraulics	4
ERE 371	Surveying for Engineers	4	ERE 430	Engineering Decision Analysis	3
ERE 335	Numerical & Computing Methods	3	ERE 365	Principles of Remote Sensing	4
CIE 337	Intro to Geotechnical Engineering	4	ERE 440	Water Pollution Engineering	3
			ERE351	Basic Engr Thermodynamics	3
Curricular Total = 82 / Semester Total =		15	Curricular Total = 98 / Semester Total =		17
SENIOR YEAR					
ERE 468	Solid Waste Management	3	ERE 489	ERE Planning and Design	3
APM 395	Prob & Statistics for Engineers	3	Gen Ed	General Education Elective	3
Gen Ed	General Education Elective	3		Engineering Elective**	3
	Engineering Elective**	3		Free Elective	3
	Engineering Elective**	3			
Curricular Total =114 / Semester Total =		15	Curricular Total = 126 / Semester Total =		12
*EARTH SCIENCE GEN ED ELECTIVES					
FCH 496 Intro to Atmos. Sciences		FOR 345 Intro to Soils		FOR 338 Meteorology	
**ESF ENGINEERING ELECTIVES [SYR courses listed in Catalog]					
Focus on theory and application of scientific principles and quantitative skills to monitor, assess, or design in the environmental resources engineering profession					
ERE 311 Eco Eng in Tropics		ERE 412 River Form & Process		ERE 441 Air Pollution Engr	
ERE 445 Hydrologic Modeling		ERE 448 Open Channel Hydraulics		ERE 475 Eco Eng for Waste Mngt	
ERE 496 Eco. Restoration Design		ERE 496 Envl Systems Engineering		ERE 496 Eco Eng & Design Sust.	
ERE 527 Stormwater Management		ERE 551 GIS for Engineers		ERE 621 Spatial Analysis	
ERE 622 Digital Image Analysis		ERE 674 Mthds Eco Treat Analysis		ERE 692 Remote Sensing Environ	
ERE 693 GIS-based Modeling					