Environmental Science (ENVI)

Curriculum Model

First Semester				Second Semester			
Freshman Year							
ENGL	1100	Written Composition I	3	ENGL	1120	Written Composition II	3
HIST		Core History	3	HIST		Core History	3
MATH	1610	Calculus I	4	BIOL	1020	Principles of Biology	4
CHEM	1030	Fund. of Chemistry I	3	CHEM	1040	Fund. of Chemistry II	3
CHEM	1031	Fund. of Chem. I Lab	1	CHEM	1041	Fund. of Chemistry II Lab	1
COMP	1000	Personal Computer Appl	2	**ENVI**	**1020**	**Fund. of Environ. Science**	**2**
or							
COMP	1200	Intro Comp Engrg & Sci	2				
ENVI	**1010**	**Intro. Environ. Science**	**0**				
			16				16
Sophomore Year							
ENGL	2200	World Lit I	3	ENGL	2210	World Lit II	3
BIOL	1030	Organismal Biology	4	CHEM	2030	Survey of Organic Chem.	3
PHYS	1500	General Physics I	4	PHYS	1510	General Physics II	4
GEOL	1100	Physical Geology	4	**GEOL**	**2100**	**Environmental Geology**	**4**
ENVI	**2010**	**Environ. Sci. Seminar**	**1**	STAT	2510	Introductory Statistics	3
			16				17
Junior Year							
BIOL	**3200**	**General Microbiology**	**4**	CHEM	3050	Analytical Chemistry	3
FORY	5470	GIS Applications*	2	CHEM	3051	Analytical Chemistry Lab	1
AGRN	**2040**	**Basic Soils**	**4**	**BIOL**	**3060**	**Principles of Ecology**	**4**
		Professional Track	**6**	**CIVL**	**3220**	**Water and Waste Treat.**	**4**
						Professional Track	**4**
			16				16
Senior Year							
		Core Social Science	3			Core Social Science	3
		Core Ethics	3			Core Fine Arts	3
FORY	**3440**	**Environmental Law**	**3**			Elective	2
		Professional Track	**7**			**Professional Track**	**7**
			16				15

Total - 128 Semester Hours

NOTES: See AU Bulletin for acceptable core courses. Courses in the environmental science major are shown in **bold** print. Six credit hours of ROTC may be substituted for the elective and four additional credit hours to be selected in consultation with the academic advisor and program director.

* Many students substitute GEOG 5830, a 4 semester credit hour course. The 2 "extra" credit hours **may** count for elective credit, and in some cases, for Professional Track credit.

Professional Track Courses - Biological Science Track

Students pursuing the **Biological Science Track** must earn credit for the following courses.[1]

Designation	Name	Credit	Prerequisite(s)
BIOL 5120	Systematic Botany	4	BIOL 3100 or Dept. Approval
ENTM 3040	General Entomology	4	BIOL 1030
BIOL 4010	Invertebrate Biodiversity	4	BIOL 1030
BIOL 4020	Vertebrate Biodiversity	4	BIOL 1030

Students pursuing the **Biological Science Track** must also earn a minimum of eight hours credit from the following list of courses. Additional courses will also be considered.

Designation	Name	Credit	Prerequisite(s)
BIOL 3100	Plant Biology	4	BIOL 1030
BIOL 5700	Appl. & Env. Microbiology	4	BIOL 3200
BIOL 5140	Plant Ecology	4	BIOL 3100, BIOL 3060, or Departmental Approval
BIOL 5620	Mycology	4	BIOL 1030
BIOL 4950	Undergraduate Seminar	1	Departmental Approval
BIOL 4980	Undergraduate Research	1-3	Departmental Approval
BIOL 3030	Evolution & Systematics	3	BIOL 1030
WILD 3280	Prin Wildlife Management	3	BIOL 1030
WILD 3281	Prin Wildlife Man. lab	1	BIOL 1030
BIOL 5090	Conservation Biology	3	BIOL 3060
BIOL 5150	Animal Community Ecology	3	BIOL 3060
BIOL 5340	Protozoology	4	BIOL 3000
BIOL 5360	Population Ecology	3	BIOL 3060 & MATH 1610
BIOL 5510	Biogeography	3	BIOL 3060
BIOL 5550	Wetland Biology	4	BIOL 3060
BIOL 4740	Herpetology	4	BIOL 4020
BIOL 5750	Ornithology	4	BIOL 3030 & BIOL 3060
BIOL 5160	Field Biology & Ecology	3-15	15 Semester Hours of BIOL
BIOL 5380	General Ichthyology	4	BIOL 1030
BIOL 5650	Ethology	4	BIOL 1030
BIOL 5760	Mammalogy	4	BIOL 1030

[1] Substitutions require the approval of the Track Advisor and the Program Director.

Professional Track Courses - General Track

Students pursuing the **General Track** must earn a minimum of 24 hours credit from the following list of courses[1]. Additional courses will also be considered.

Designation	Name	Credit	Prerequisite(s)
AGRN 5000	Soils and Environ. Quality	3	AGRN 2040
AGRN 5060	Soil Microbiology	4	BIOL 3200
BIOL 5090	Conservation Biology	3	BIOL 3060
BIOL 5660	Food Microbiology	5	BIOL 3200
BIOL 5700	Applied and Environ. Micro.	4	BIOL 3200
CHEN 5650	Hazardous Materials Mgt.	2	CHEM 2030 or CHEM 3080 CHEN 3820 or CIVL 5210
CIVL 5230	Environmental Health Engrg.	3	Departmental Approval
CIVL 5240	Air Pollution	3	Departmental Approval
GEOL 5100	Hydrogeology	3	CHEM 1030, MATH 1610, PHYS 1500, GEOL 1100, and GEOG 5830
ISNY 3020	Occup. Safety & Ergonomics	3	Departmental Approval
HIST 3550	American Environmental History	3	

[1] Substitutions require the approval of the Program Director.

Professional Track Courses - Engineering Science Track

Students pursuing the **Engineering Science Track** should take COMP 1200 MatLab and should substitute PHYS 1600 and PHYS 1610 for PHYS 1500 and PHYS 1510. In addition they, must earn a minimum of 24 hours credit from the following list of courses. Students who complete all the required courses shown below, complete CIVL 3110, have acceptable overall and major GPAs (typically 3.00, or higher), and earn acceptable Graduate Record Examination (GRE) scores may be eligible to enter directly into the Environmental Engineering Masters Degree program offered in the Department of Civil Engineering.

Students pursuing the **Engineering Science Track** must earn credit for the following courses.[1]

Designation	Name	Credit	Prerequisite(s)
ENGR 2050	Statics	3	PHYS 1600, Coreq MATH 2630
ENGR 2350	Dynamics	3	ENGR 2050, Coreq. MATH 2650
ENGR 2200	Int. Thermo., Fl. Mech. & Heat	3	CHEM 1040, PHYS 1610, MATH 2650
MATH 1620	Calculus II	4	MATH 1610
MATH 2630	Calculus III	4	MATH 1620
MATH 2650	Linear Differential Equations	3	Coreq. MATH 2630

Students pursuing the **Engineering Science Track** must also earn a minimum of four credit hours from the following list of courses. Additional courses will also be considered.

Designation	Name	Credit	Prerequisite(s)
CIVL 3110	Hydraulics	4	MATH 2650, Departmental Approval Coreq. ENGR 2200, ENGR 2350
CIVL 5230	Environmental Health Engrg.	3	Departmental Approval
CIVL 5240	Air Pollution	3	Departmental Approval
INSY 3020	Occup. Safety & Ergonomics	3	Departmental Approval

[1] Substitutions require the approval of the Program Director.

Professional Track Courses - Physical Science Track

Students pursuing the **Physical Science Track** must earn a minimum of 24 hours credit from the following list of courses.[1] Additional courses will also be considered.

Designation	Name	Credit	Prerequisite(s)
GEOL 2010	Mineralogy with Optical Crystallography	5	CHEM 1040 or Dept. App.
GEOL 2050	Igneous and Met. Petrology	4	GEOL 2010
GEOL 3400	Structural Geology	4	GEOL 2050
GEOL 4260	Intro. to Geochemistry	3	CHEM 1040, GEOL 2050
GEOL 4930	Directed Studies-Env. Geol.	1-3	Departmental Approval
GEOL 5100	Hydrogeology	3	GEOL 1100, CHEM 1030, MATH 1610, PHYS 1500 and GEOG 5830
AGRN 5000	Soils and Env. Quality	3	AGRN 2040
CHEN 5650	Hazardous Materials Mngt.	2	CHEM 2030 or 2080 CHEN 3820 or CIVL 5210

[1] Substitutions require the approval of the Track Advisor and the Program Director.

Professional Track Courses - Soil Science Track

Students pursuing the **Soil Science Track** must earn 24 semester hours credit from the following courses. [1] Additional courses will also be considered.

Designation	Name	Credit	Prerequisite(s)
AGRN 5000	Soils and Environmental Qual.	3	AGRN 2040
AGRN 5020	Nutrient Management	3	AGRN 2040
AGRN 5080	Soil Resources and Cons.	4	AGRN 2040
AGRN 5060	Soil Microbiology	4	BIOL 3200
AGRN 5150	Soil Morphology	4	AGRN 2040
AGRN 5300	Soil Chemistry	4	AGRN 2040
AGRN 5590	Soil Physics	4	AGRN 2040 and MATH 1610
AGRN 5970	Special Problems	2	Departmental Approval
AGRN 4200	Soil Judging (Fall)	2	Departmental Approval
AGRN 4210	Advanced Soil Judging (Spring)	2	Departmental Approval
BSEN 4970	Nonpoint Source Pollution	3	STAT 2510 and AGRN 2040
GEOL 5100	Hydrogeology	3	GEOL 1100, CHEM 1030, MATH 1610, PHYS 1500 and GEOL 1100

Note: For Soil Judging classes see instructor (shawjo1@auburn.edu) for enrollment

[1] Substitutions require the approval of the Track Advisor and the Program Director.