UCONN | COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES

PLAN OF STUDY FORM

Catalog Year 2020-2021 ENVIRONMENTAL SCIENCES

DIRECTIONS

- This Plan of Study (plan) is used as a *worksheet* during initial registration and every subsequent semester to determine minimum requirements and progress toward completing the degree. A *preliminary plan* is developed and submitted to the advisor by the end of the sophomore year (or equivalent time for transfer students).
- A final plan must be approved by advisor and the department head, and submitted to the Degree Auditor in the Registrars Office (1st floor, Wilbur Cross Building) no later than the end of the tenth week of classes of the semester prior to the anticipated semester of graduation.
- Students must complete all major and general education course requirements and earn:

At least 120 credits toward the degree

At least a 2.0 Cumulative Grade Point Average (CGPA)

At least a 2.0 Grade Point Average for ALL courses listed in the 36 Credit Requirement

- University of Connecticut General Education Requirements (GER), are outlined in the Academic Regulations section of the *Undergraduate Catalog*. Only approved courses may be used to meet requirements.
- Students should use their Academic Requirements Report (accessible in Student Admin) along with the Plan of Study to view their graduation requirements and assess status toward degree. Students must be attentive to credit restrictions (repeated courses, out of sequence classes, etc.). Courses taken Pass/Fail may NOT be used to meet any requirements.

STUDENT AND DEGREE INFORMATION

Must be filed out complete on your final plan of study.				<u>Select One:</u>	D Prelimina	ary Plan	🗆 Final Plan
Name	Middle				_ Student I.D.: _		
				Last			
Phone #:	Err	ail Addres	s:				
Current Address:							
	Street		City/Town		State	Zio Code	
Month and Year of Anticipated Gra	duation:	🛛 May		□ August	December	Year: _	
Are you pursuing a double major ir		Yes	□ No	If YES, subm	it Double Major A	ttachment v	with final plans of study
Please list below any minors that y	ou plan to ea	rn and sub	mit a fina	al minor plan of	studv with vour fi	nal maior p	lan of study.
At the completion of semester you	intend to grad	duate, will y	you have	e earned 120 or	more credits?]Yes	□No
APPROVAL SIGNATURES							
Student Signature					Date		
Advisor Signature					Date		
Department Head's Signature					Date		

The final plan of study must be submitted to the Registrar's Office in the Wilbur Cross Building. Please remember to keep a copy of the plan for your records.

PART I: GENERAL EDUCATION REQUIREMENTS (GER) ¹

Courses approved to meet GER are outlined in the Academic Regulations section of the Undergraduate Catalog.

Courses in Content Areas 1-3 must be in 6 different departments.

One course from Content Area 4 may be used to fulfill a requirement in Content Areas 1-3.

Cont	ent Area	Dept.	Course No.	Credits	Semester/Year	Grade
	Foreign Languages (3 years single language in hi	gh school) O	R pass second	course in fir	st-year college sequenc	e
					<i>I</i>	
					<i>I</i>	
	ENGL 1007 or 1010 or 1011				<i>I</i>	
	"W" Course				<i>I</i>	
	"W" Course (within major)				<i>I</i>	
	"Q" Course				<i>I</i>	
	"Q" Course (MATH or STAT)				/	
	Environmental Literacy (total 3 credits)				<i>I</i>	
1	Arts & Humanities (total 6 credits)				<i>I</i>	
	· · · · ·				<i>I</i>	
2	Social Sciences (total 6 credits)				<i>I</i>	
					<i>I</i>	
3	Science & Technology (total 6 credits – include				<i>I</i>	
	one 4-credit laboratory course)				<i>I</i>	
4	Diversity & Multiculturalism (total 6 credits – one must be "International" course)				<i>I</i>	
	,				<i>I</i>	

Computer Technology Competency: See major requirements

Information Literacy Competency: See major requirements

PART II: INDIVIDUAL COURSE REQUIREMENTS OF ENVIRONMENTAL SCIENCES MAJOR¹

Courses in this section that are numbered 2000-level or above may also be used to meet the 36 Credit Requirement (Part III).

ALL of required courses in Basic (Natural) Sciences:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
BIOL	1107	Principles of Biology I	4	<i>I</i>	
D IOI	□ 1108	Principles of Biology II			
BIOL	□ <u>or</u> 1110	or Introduction to Botany	4	<i>I</i>	
	□ 1127Q <u>and</u> 1128Q	General Chemistry I and II			
CHEM	□ <u>or</u> 1124Q, 1125Q <u>and</u> 1126Q	or Fundamentals of General Chemistry		<i>I</i>	
MATH	1131Q	Calculus I	4	<i>I</i>	
MATH	1132Q	Calculus II	4	<i>I</i>	
	☐ 1201Q <u>and</u> 1202Q	General Physics I and II			
PHYS	□ <u>or</u> 1401Q <u>and</u> 1402Q	or General Physics with Calculus	8	<i>I</i>	
	□ 1000Q	Intro to Statistics I			
STAT	□ <u>or</u> 1100Q	or Elementary Concepts of Statistics		<i>I</i>	
	□ <u>or</u> 3025Q	or Statistical Methods (Calculus Level I)			
NRE	1000E	Environmental Science	3	<i>I</i>	

*ARE 1150, ECON 1200 or 1201, GEOG 2300, GSCI 1050, and MARN 1002 are pre-requisites for several upper division course concentration options. It is the student's responsibility to ensure that all pre-requisites in the catalog for concentration courses have been satisfied.

Required Sophomore Seminar Course:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
ENVS	2000	Integrating Humans and the Environment	3	<i>I</i>	

Required Capstone Course:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
NRE	4000W	Natural Resources Planning and Management	3	<i>I</i>	

Required Internship or Research Experience (1-6 credits): (approved by advisor)

Dept.	No.	Course Title	Credits	Semester/Year	Grade
				/	

Writing Competency: Students must pass NRE 4000W for required 2000-level or above course approved by major.

Computer Technology Competency: Students must pass NRE 4000W.

Information Literacy Competency: Students must pass NRE 4000W.

In addition, all students majoring in Environmental Sciences must declare and fulfill the requirements of a concentration in a discipline associated with the program before graduation. Approved concentrations are listed on the following pages:

SUSTAINABLE SYSTEMS CONCENTRATION

Students must complete at least two courses from each of the following Knowledge Competencies. The same course cannot be used to fulfill more than one knowledge competency.

Dept.	No.	Course Title	Credits	Semester/Year	Grade
EEB	□ 2208E	Introduction to Conservation Biology	3		
GEOG	□ 3340	Environmental Planning and Management	3		
MARN	□ 3030	Coastal Pollution and Bioremediation	3		
NRE	□ 2010	Natural Resources Measurements	3		
NRE	□ 2215E	Introduction to Water Resources	3		
NRE	□ 2345	Introduction to Fisheries and Wildlife	3	1	
NRE	□ 2600E	Global Sustainable Natural Resources	3	,	
NRE	□ 3105	Wetlands Biology and Conservation	3		
NRE	□ 3125	Watershed Hydrology	3	/	
NRE	□ 3155	Water Quality Management	3		
NRE	□ 3305	African Field Ecology & Renewable Resource Mgmt.	4		
NRE	□ 3335	Wildlife Management	3		
NRE	🗆 3345/W	Wildlife Management Techniques	4		
NRE	□ 3500	Exurban Silviculture	4		
NRE	□ 3535	Remote Sensing of the Environment	3		
NRE	□ 4335	Fisheries Management	4		
NRE	□ 4575	Natural Resource Applications of GIS	4		

Resource Management – TWO of the following:

Ecological Systems – TWO of the following:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
EEB	🗆 2244E/W	General Ecology			
EEB	3247	Freshwater Ecology	4	<i>I</i>	
EEB	🗆 4230W	Methods of Ecology	4		
EEB/MARN	□ 3230/3014	Marine Biology	3	<i> </i>	
NRE	□ 2455	Forest Ecology	3		
NRE	□ 3205	Stream Ecology	3		
NRE	□ 4340	Ecotoxicology	3		

Students must complete at least one course from each of the following Knowledge Competencies. The same course cannot be used to fulfill more than one knowledge competency.

Built Systems – ONE of the following:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
AH	□ 3175E	Environmental Health	3		

Dept.	No.	Course Title	Credits	Semester/Year	Grade
GEOG	□ 2400E	Introduction to Sustainable Cities	3		
NRE	□ 3265	Sustainable Urban Ecosystems	3	<i>I</i>	
LAND	□ 3230WE	Sustainable Environmental Planning & Landscape Design	3		

Governance & Policy – ONE of the following:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
AH	□ 3174	Environmental Laws, Regulations and Issues	3		
ARE	□ 2235	Marine Economics and Policy	3		
ARE	🗆 3434E	Environmental and Resource Policy	3		
ARE	□ 3437E	Marine Fisheries Economics and Policy	3		
ARE	□ 4438E	Valuing the Environment	3		
ARE	□ 4462E	Environmental and Resource Economics	3	<i>I</i>	
ECON/MAST	□ 2467E	Economics of the Oceans	3		
GEOG	🗆 3320W	Environmental Evaluation & Assessment	3		
MAST/POLS	□ 3832	Maritime Law	3		
NRE	□ 3000	Human Dimensions of Natural Resources	3		
NRE	□ 3201	Conservation Law Enforcement	3		
NRE	□ 3245	Environmental Law	3		
POLS	□ 3412	Global Environmental Politics	3		
SOCI	□ 3407/W	Energy, Environment, and Society	3		

Ethics, Values, & Culture – ONE of the following:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
ANTH	□ 3339	Cultural Designs for Sustainability	3		
ENGL	□ 3240E	American Nature Writing	3		
ENGL	□ 3715E	Nature Writing Workshop	3		
GEOG	□ 3410	Human Modifications of Natural Environments	3		
HIST	□ 3540E	Environmental History of the Americas	3		
HIST	□ 3542	New England Environmental History	3	I	
JOUR	□ 3046	Environmental Journalism	3	<i>,</i>	
PHIL	□ 3216E	Environmental Ethics	3		
SOCI	□ 2701	Sustainable Societies	3		
SOCI	□ 2705	Sociology of Food	3		
SOCI	□ 2709/W	Society and Climate Change	3		
SOCI	🗆 3407/W	Energy, Environment, and Society	3		

Dept.	No.	Course Title	Credits	Semester/Year	Grade
ARE	□ 2235	Marine Economics and Policy	3		
ARE	□ 4305	Sustainable Economic Development	3		
ARE	🗆 4438E	Valuing the Environment	3	<i>I</i>	
ARE	□ 4444	Economics of Energy, Climate, and the Environment	3		
ARE	□ 4462E	Environmental and Resource Economics	3		
ECON	□ 3473	Economic Development	3		
ECON/MAST	□ 2467E	Economics of the Oceans	3		
ECON	□ 3466E	Environmental Economics	3		

Economics & Business - ONE of the following:

GLOBAL CHANGE CONCENTRATION

Students must complete at least two courses from each of the following Knowledge Competencies. The same course cannot be used to fulfill more than one knowledge competency.

Climate Change and its Impacts - TWO of the following:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
GEOG	□ 3400	Climate and Weather	3		
GEOG	□ 4300	Advanced Physical Geography	3	<i> </i>	
GSCI	□ 3010	Earth History and Global Change	3		
MARN	□ 3000E	The Oceans and Global Climate	3	/	
NRE	□ 3115	Air Pollution	3	· · · · · · · · · · · · · · · · · · ·	
NRE	□ 3146	Climatology	3		
NRE	□ 2600E	Global Sustainable Natural Resources	3		
NRE	□ 4170	Climate-Human-Ecosystem Interactions	3		

Land and Ocean Use and its Impacts - TWO of the following:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
EEB	□ 2208E	Introduction to Conservation Biology	3		
GEOG	□ 3310	Fluvial Geomorphology	3	<i> </i>	
GEOG	□ 3410	Human Modifications of Natural Environments	3		
GSCI	□ 3020	Earth Surface Processes	3	/	
GSCI/MARN	□ 3230	Beaches and Coasts	3	· · · · · · · · · · · · · · · · · · ·	
MARN	□ 3001	Foundations of Marine Sciences	4		
MARN	□ 3030	Coastal Pollution and Bioremediation	3		
MARN	□ 4066	River Influences on the Marine Environment	3		

Dept.	No.	Course Title	Credits	Semester/Year	Grade
NRE	□ 2215E	Introduction to Water Resources	3		
NRE	□ 2345	Introduction to Fisheries and Wildlife	3		
NRE	□ 2600E	Global Sustainable Natural Resources	3		
NRE	□ 3105	Wetlands Biology and Conservation	3		
NRE	□ 3115	Air Pollution	3		
NRE	□ 3155	Water Quality Management	3		
NRE	□ 4340	Ecotoxicology	3		
NRE/GSCI	□ 4135/4735	Introduction to Ground Water Hydrology	4		

Natural Science - TWO of the following:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
CHEM	□ 4370	Environmental Chemistry – Atmosphere	3		
CHEM	□ 4371	Environmental Chemistry – Hydrosphere	3		
EEB	🗆 2244E/W	General Ecology	4		
EEB	□ 2245/W	Evolutionary Biology	4		
EEB	□ 3247	Freshwater Ecology	4		
EEB/MARN	3230/3014	Marine Biology	3	1	
EEB/GSCI	□ 4120	Paleobiology	4	<i>I</i>	
GEOG	□ 2300	Introduction to Physical Geography	3	1	
GSCI	□ 4110	Sedimentology	3	<i> </i>	
GSCI	□ 4210	Glacial Processes and Materials	3		
MARN	□ 2002	Marine Science I	3		
MARN	□ 2060	Introduction to Coastal Meteorology	3		
MARN	🗆 3003Q	Environmental Reaction and Transport	4		
MARN	□ 4030W	Chemical Oceanography	3		
MARN	□ 4060	Physical Oceanography	3		
NRE	□ 2455	Forest Ecology	3		
NRE	□ 3125	Watershed Hydrology	3		
NRE	□ 3145	Meteorology	3		
NRE	□ 3205	Stream Ecology	3		
SPSS	□ 2120	Environmental Soil Science	3		
SPSS	□ 3420	Soil Chemistry Components	4		

Students must complete at least one course from each of the following Knowledge Competencies. The same course cannot be used to fulfill more than one knowledge competency.

Methods - ONE of the following:

Methods - ONE Dept.	No.	Course Title	Credits	Semester/Year	Grade
CE	□ 2251	Probability & Statistics in Civil & Envir. Engineering	3		
CE/ENVE/ GSCI	□ 3530 □ 3710	Engineering and Environmental Geology	3		
EEB	□ 3266	Field Herpetology	3		
EEB	□ 4230W	Methods of Ecology	4		
EEB	□ 4262	Field Methods in Ornithology	3	,	
GEOG	🗆 3500Q	Geographic Data Analysis	4	<i>I</i>	
GEOG/GSCI	□ 4230	GIS & Remote Sensing for Geoscience Applications	3		
GEOG/MARN	□ 3505	Remote Sensing of Marine Geography	3		
GSCI/NRE	□ 4735 □ 4135	Introduction to Ground Water Hydrology	4		
MARN	🗆 3003Q	Environmental Reaction and Transport	4		
NRE	□ 2000	Introduction to Geomatics	4		
NRE	□ 2010	Natural Resources Measurements	3		
NRE	□ 3305	African Field Ecology & Renewable Resources Mgmt.	4		
NRE	🗆 3345/W	Wildlife Management Techniques	4		
NRE	□ 3535	Remote Sensing of the Environment	3		
NRE	□ 4335	Fisheries Management	4		
NRE	□ 4475	Forest Management	4		
NRE	□ 4535	Remote Sensing Image Processing	3		
NRE	□ 4544	Land Surveying for Environmental Mgmt. & Planning	3		
NRE	□ 4545	Geodesy	3		
NRE	□ 4575	Natural Resource Applications of GIS	4		
NRE	□ 4665	Natural Resources Modeling	3		
PHYS	□ 2400	Mathematical Methods for the Physical Sciences	3		
STAT	🗆 2215Q	Introduction to Statistics II	3		
STAT	🗆 3025Q	Statistical Methods – Calculus Level 1	3		

Governance & Policy - ONE of the following:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
AH	□ 3174	Environmental Laws, Regulations and Issues	3		
ARE	□ 2235	Marine Economics and Policy	3		
ARE	□ 3434E	Environmental and Resource Policy	3		

Dept.	No.	Course Title	Credits	Semester/Year	Grade
ARE	□ 3437E	Marine Fisheries Economics and Policy	3		
ARE	□ 4438E	Valuing the Environment	3		
ARE	□ 4462E	Environmental and Resource Economics	3		
ECON/MAST	□ 2467	Economics of the Oceans	3		
EVST/POLS	□ 3412	Global Environmental Politics	3		
GEOG	🗆 3320W	Environmental Evaluation & Assessment	3	1	
MAST/POLS	□ 3832	Maritime Law	3	<i>i</i>	
NRE	□ 3000	Human Dimensions of Natural Resources	3		
NRE	□ 3201	Conservation Law Enforcement	3		
NRE	□ 3245	Environmental Law	3		
SOCI	🗆 3407/W	Energy, Environment, and Society	3		

HUMAN HEALTH CONCENTRATION

ALL of the follo	LL of the following:							
Dept.	No.	Course Title	Credits	Semester/Year	Grade			
AH	□ 3021	Environment, Genetics and Cancer	3	<i>I</i>				
AH	□ 3175E	Environmental Health	3	<i>I</i>				
AH	□ 3275	HAZWOPER	3	<i>I</i>				
ANSC	□ 4341	Food Microbiology and Safety	3	<i>I</i>				
МСВ	□ 2610	Fundamentals of Microbiology	4	<i>I</i>				

TWO of the following totaling 6 or more credits:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
ANSC	□ 4642	Food Microbiology Laboratory	1		
МСВ	□ 2400	Human Genetics	3	/	
МСВ	□ 3010	Biochemistry	5		
МСВ	□ 3011	Human Metabolism and Disease	2	1	
МСВ	□ 3201	Gene Expression	3	·	
МСВ	□ 3633	Pathogenic Microbiology	4		
МСВ	4211	Basic Immunology	3		
PVS	□ 2100	Anatomy and Physiology of Animals	4		

ONE of the following:

Dept.	No.	Course Title	Credits	Semester/Year	Grade
AH	□ 3570	Health and Safety Management in the Workplace	3		
AH	□ 3571	Health Hazards in the Workplace	3		

Dept.	No.	Course Title	Credits	Semester/Year	Grade
AH	□ 3573	Health and Safety Standards in the Workplace	3		
AH	□ 3574	Ergonomics	3		
PVS	□ 4300	Principles of Pathobiology	3	<i>I</i>	

UCONN | COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES

ONLINE PLAN OF STUDY FORM ATTACHMENT

PART III: 36 CREDIT REQUIREMENT FOR ALL MAJORS¹

Each student is required to successfully complete at least 36 credits of courses that are numbered 2000-level or above in or relating to their major. These courses may also be used to meet other requirements. This group of courses must:

- 1. Total not less than 36 credits
- 2. Be numbered 2000 or above
- 3. Be approved by student's advisor and department head
- 4. Be taken at the University of Connecticut²
- 5. Include two or more departments
- 6. Include at least 15 credits from departments in the College of Agriculture, Health and Natural Resources
- 7. Have a combined Grade Point Average of at least 2.0
- 8. Not include more than 6 credits (combined) of Independent Study, Internship, or Field Studies (if included, these courses must be taken at the University of Connecticut)
- 9. Not be taken on Pass/ Fail (P@ / F@)
- 10. Not include more than 6 credits of Satisfactory/Unsatisfactory (S/U) coursework

Dept.	No.	Credits	Semester/Year	Grade	Dept.	N	0.	Credits	Semester/Year	Grade
									/	
			,							
			/							
			/						<i>I</i>	
			/						<i>I</i>	
			/						/	
									1	
			//						I	
			/						<i>I</i>	
			/						/	
			/						/	
			1						1	
			//						<i>I</i>	
			<i>I</i>						<i>I</i>	

Credits from departments in CAHNR (15 required):

(CAHNR subject codes include AGNR, AH, ANSC, ARE, DGS, DIET, ENVS, EVST, HORT, KINS, LAND, MLSC, NRE, NUSC, PLSC, PVS, SOIL, SPSS, TURF)

Total Credits in 36 credit group: _____

¹Courses taken on Pass/Fail may NOT be used to meet any requirements.

²**Residence Requirement.** It is expected that advanced course work in the major will be completed at the University of Connecticut. However, students may be eligible to use up-to six credits from other institutions in the 36-credit group if approved by their advisor and department head. These credits must be identified as courses comparable to specific University of Connecticut courses and cannot include internships, special topics, or non-specific discipline credits. Transfer students must complete at least 30 credits of 2000-level or higher course work at the University of Connecticut, including at least 15 credits in College of Agriculture, Health and Natural Resources courses.