ENSP – Environmental Geosciences & Restoration

NOTE: always refer to the Schedule of Classes for the most up-to-date information regarding course offerings, prerequisites & restrictions.

ENSP Core

Course	Title	Grade
All three		
ENSP101 (NS)	Intro to Env Science	
ENSP102 (HS)	Intro to Env Policy	
ENSP400 (SP)	Senior Capstone	
Applied Science and Policy (one)		
ENSP305	Applied Spatial Methods	
ENSP306	Qual Research/Env Sci	
ENSP330	Environmental Law	
ENSP340	Sci, Ethics, Law: Water	
ENSP342	Oceans: Integ. Policy	
ENSP350	Energy: Science & Policy	
ENSP360	Water, Food, Pub. Health	
ENSP370	Environmental Justice	
Calculus		**Grade**
MATH140 (MA)	Calculus I	
Statistics (pick one)		**Grade**
BIOM301 (AR)	Intro to Biometrics	
GEOG306 (AR)	Intro to Quant Methods	
PSYC200 (AR)	Stat Methods in Psyc	

One course from each of the following:

Biology (req'd)		**Grade**
BSCI160 &	Ecology & Evolution/Lab	
BSCI161 or BSCII80	Evolution lab or Pric.Bio lab	
Chemistry (req'd)		**Grade**
CHEM131/132 (NL)	Gen Chemistry I/Lab	
Earth Sci (req'd, both)		**Grade**
GEOL100/110 (NL) *or*	Physical Geology/Lab or	
GEOL120/110 (NL)	Environ Geology/Lab	
and		
ENST200 (NL)	Princ of Soil Science	
Economics (pick one)		**Grade**
AREC240 (HS)	Intro to Econ and Env	
AREC241 (HS, IS)	Env, Econ, and Policy	
ECON200 (HS)	Princ of Microeconomics	

ENSP Graduation Requirements

_____ Students must earn C- or higher in all courses used for ENSP Core and Concentration requirements.
_____ Students' major GPA must be 2.0 or higher.

General Education

Fundamental Studies (15 credits)

Requirements	Course	Cr
Academic Writing (AW)		3
Professional Writing (PW)		3
Oral Communication (OC)		3
Math (MA)	Calculus	3-4
Analytical Reasoning (AR)	Statistics	

Distributive Studies (25 credits)

Requirements	Course	Cr
Natural Sciences w/Lab (NL)	ENSP Lab Sci	4
Natural Science (NS)	ENSP 101	3
History and/or Social Sci (HS1)	ENSP 102	3
History and/or Social Sci (HS2)		4
Humanities (HU1)		3
Humanities (HU2)		3
Scholarship in Practice (SP, major)	ENSP 400	3
Scholarship in Practice (SP, non-major)		3

I-Series (6 credits)*

* May double-count with Distributive Studies

Requirements	Course	Cr
I- Series (IS)		3
I- Series (IS)		3

Diversity (4-6 credits)*

* May double-count with Distributive Studies

Requirements	Course	Cr
Understanding Plural Societies (UP)		3-6
Understanding Plural Societies (UP) *or* Cultural Competency (CC)		0-3

Experiential Learning (0-3 credits)*

* May overlap with major requirements

Requirements	Course	Cr
Practical experience is *required* in this concentration		

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REQUIREMENTS:

BASIC SCIENCES (3 requirements, 12 credits)

Course	Description	Cr	Notes	Grade
CHEM 231/232	Organic Chemistry I	4	CHEM 131/132 prerequisite	
MATH141	Calculus II	4	MATH140 prerequisite	
PHYS161 & PHYS261	Gen Physics: Mech & Part Dyn Phys lab	3 1	MATH141 prerequisite PHYS161 prerequisite	

UPPER LEVEL REQUIREMENTS (5 courses, 17 credits):

BSCI 361	Principles of Ecology	4	BSCI 160/161, and Calculus prerequisite	
GEOL 340	Geomorphology	4	GEOL 100/110 prerequisite	
GEOL451 *or* GEOL452	Groundwater Watershed & Wetland Hydrology	3 3	CHEM131/132, MATH140, GEOL100/110, Jr. standing	
GEOL453	Princ and Prac of Ecosys Rest	3	MATH120 or 140; GEOL100 or 120, or ENST200.	
ENSP 386	Internship	3	Approved internship proposal	

AREAS OF DEPTH - at least 5 classes and 15 credits, including ____ a minimum of 6 cr from each of two areas ***- or -*** ____ a minimum of 9 cr in one area

Course	Description	Cr	Notes	Grade
Techniques and Application:				
GEOG272	Intro. to Earth Observation Sci.	3		_____
GEOG373	Geographic Info Systems	3		_____
Environmental Restoration:				
ENST 414	Soil Morph Genesis and Classif.	4	ENST 200	
ENST 421	Soil Chemistry	4	ENST 200	_____
ENST 422	Soil Biochem & Microbial Ecol.	3	ENST 200	_____
ENST 423	Soil-Water Pollution	3	ENST 200	_____
ENST 430	Wetland Soils	3	ENST 200	_____
ENST 450	Wetland Ecology	3	BIOM301	_____
ENST452	Wetland Creation and Restoration	3	BSCI 160/161; BSCI362, ENST360, or	_____
PLSC471	Forest Ecology	3	ENST450 or BSCI 160/161	_____
Surficial Geology:				
GEOL 322	Mineralogy	4	GEOL100/110, CHEM 131/132	_____
GEOL 342	Sedimentation and Stratigraphy	4	GEOL 322	_____
GEOL 436	Biogeochemistry	3	GEOL 100/110, CHEM 131/132,	_____
			GEOL322, and MATH 140 or 220	_____
GEOL 437	Global Climate Change Past/Pres.	3	CHEM131/132, GEOL100, and MATH115	_____
GEOL 444	Low-Temperature Geochemistry	4	CHEM131/132, GEOL 100/110, GEOL	_____
			322, and MATH115	_____
GEOL451*	Groundwater*	3	CHEM 131/132, GEOL100/110	_____
GEOL452*	Watershed &Wetland Hydro*	3	Jr. standing	_____
* If not taken to satisfy upper level requirement above				

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Course	Description	Cr	Notes	Grade
Deep-Earth Geology:				
GEOL102	Historical Geology	4	GEOL100 or GEOL120	_____
GEOL341	Structural Geology	4	GEOL102	_____
GEOL423	Optical Mineralogy	3	GEOL100 or GEOL120, GEOL322, CHEM131/132	_____
GEOL443	Petrology	4	GEOL100 or GEOL120, GEOL322, GEOL423, CHEM131/132	_____
GEOL445	High-Temperature Geochemistry	4	MATH115; GEOL100; GEOL322; CHEM131 and CHEM132	_____
GEOL446	Geophysics	3	MATH140, MATH141	_____
GEOL455	Marine Geophysics	3	GEOL100 or GEOL120, MATH141, PHYS141 or PHYS161	_____
GEOL456	Engineering Geology	3	GEOL100 or GEOL120, MATH141, PHYS141 or PHYS161	_____
GEOL457	Seismology	3	GEOL100 or GEOL120, MATH141	_____