

# ENSP – Environmental Geosciences & Restoration

**Effective -- Fall 2016**

Reviewed 9.1.16 - WW

<b>ENSP Core</b>				<b>General Education</b>		
<b>All</b>				<b>Fundamental Studies (15 credits)</b>		
<b>Course</b>	<b>Title</b>	<b>Offered</b>	<b>Grade</b>	<b>Requirements</b>	<b>Course</b>	<b>Cr</b>
ENSP101 (NS) ENSP102 (HS) ENSP400 (SP)	Intro to Env Science Intro to Env Policy Senior Capstone	Fa Sp Fa,Sp		Academic Writing (AW)		3
<b>Applied Science and Policy (one)</b>				<b>Distributive Studies (25 credits)</b>		
ENSP305 ENSP330 ENSP340 ENSP342 ENSP350	Quant. Methods Environmental Law Sci, Ethics, Law: Water Oceans: Integ. Policy Energy & Science	Sp Fa, Sp Fa Sp TBA		<b>Requirements</b>		
<b>Calculus (one)</b>				<b>Course</b>		
MATH140 (MA)	Calculus I	Fa,Sp,Su	<b>Grade</b>	Natural Sciences w/Lab (NL)	ENSP Lab Sci	4
<b>Statistics (one)</b>				<b>Cr</b>		
BIOM301 (AR) GEOG306 (AR) PSYC200 (AR)	Intro to Biometrics Intro to Quant Methods Stat Methods in Psyc	Fa,W,Sp Fa,Sp,Su, Fa,Sp,Su	<b>Grade</b>	Natural Science (NS)	ENSP 101	3
<b>One course from each of the following:</b>				<b>I-Series (6 credits)*</b>		
<b>Biology (req'd)</b>				* May double-count with Distributive Studies		
BSCI160/161 (NL)	Ecology & Evolution/Lab	Fa,Sp,Su	<b>Grade</b>	<b>Requirements</b>		
<b>Chemistry (req'd)</b>				<b>Course</b>		
CHEM131/132 (NL)	Gen Chemistry I/Lab	Fa,Sp,Su	<b>Grade</b>	I- Series (IS)		3
<b>Earth Sci (req'd, both)</b>				<b>Cr</b>		
GEOL100/110 (NL) <i>or</i> GEOL120/110 (NL) <i>and</i> ENST200 (NL)	Physical Geology/Lab <i>or</i> Environ Geology/Lab Princ of Soil Science	Fa,Sp,Su Fa,Sp,Su Fa	<b>Grade</b>	I- Series (IS)		3
<b>Economics (one)</b>				<b>Diversity (4-6 credits)*</b>		
AREC240 (HS) AREC241 (HS, IS) ECON200 (HS)	Intro to Econ and Env Env, Econ, and Policy Princ of Microeconomics	Fa Sp Fa,W,Sp,Su	<b>Grade</b>	* May double-count with Distributive Studies		
<b>ENSP Graduation Requirements</b>				<b>Requirements</b>		
_____ Students must earn <u>C- or higher</u> in all courses used for ENSP Core and Concentration requirements.				<b>Course</b>		
_____ Students' major GPA must be 2.0 or higher.				<b>Cr</b>		
<b>ENSP Graduation Requirements</b>				<b>Graduation Requirements</b>		
_____ Students must earn <u>C- or higher</u> in all courses used for ENSP Core and Concentration requirements.				Up to 6 AP courses <b>may</b> be used for Gen Ed		
_____ Students' major GPA must be 2.0 or higher.				There are <b>at least</b> 40 non-overlapping Gen Ed credits		
_____ Students' major GPA must be 2.0 or higher.				No more than 60 credits earned from Community College		
_____ Students' major GPA must be 2.0 or higher.				Last 30 credits must be earned at Maryland		
_____ Students' major GPA must be 2.0 or higher.				120+ cumulative credits <i>and</i> 2.0+ cum GPA		

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### BASIC SCIENCES (12 credits)

Course	Description	Cr	Offered	Prerequisites	Grade
CHEM 231/232	Organic Chemistry I	4	Sp,F,Su	CHEM 131/132	
MATH141	Calculus II	4	Sp,F,Su	MATH140	
PHYS141 <i>or</i> PHYS161/174	Principles of Physics Gen Physics: Mech and Part Dyn & Physics laboratory intro	4 3/1		no longer offered MATH141	

**UPPER LEVEL REQUIREMENTS (17 credits):** Note that it's not possible to take all three of GEOL451, 452 and 453 during the same semester. Please consult with your EGR advisor ASAP after declaring this concentration to schedule your courses appropriately.

BSCI 361	Principles of Ecology	4	F,W,Sp	BSCI 160/161	
GEOL 340	Geomorphology	4	Sp	GEOL 100/110	
GEOL451 <i>or</i> GEOL452	Groundwater Watershed & Wetland Hydrology	3 3	F F	CHEM 131/132, GEOL100/110, MATH141 Jr. standing	
GEOL453	Princ and Prac of Ecosys Rest	3	F	MATH220 or 140; GEOL100 or 120, or ENST200.	
ENSP 386	Internship	3	F,Sp,Su	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	Offered	Prerequisites	Grade
<b>Techniques and Application:</b> GEOG372 GEOG373	Remote Sensing Geographic Info Systems	3 3	F,W,Sp,Su F,W,Sp,Su		_____ _____
<b>Environmental Restoration:</b> ENST 414 ENST 421 ENST 422 ENST 423 ENST 430 ENST 450 ENST452 PLSC471	Soil Morph Genesis and Classif. Soil Chemistry Soil Biochem & Microbial Ecol. Soil-Water Pollution Wetland Soils Wetland Ecology Wetland Creation and Restoration Forest Ecology	4 4 3 3 3 3 3 3	F Sp Sp F Sp F Sp Sp	ENST 200 ENST 200 ENST 200 ENST 200 ENST 200 BIOM301 BSCI 160/161; BSCI362, ENST360, or ENST450 BSCI 160/161	_____ _____ _____ _____ _____ _____ _____ _____
<b>Surficial Geology:</b> GEOL 322 GEOL 342 GEOL 436  GEOL 437 GEOL 444  GEOL451* GEOL452*	Mineralogy Sedimentation and Stratigraphy Biogeochemistry  Global Climate Change Past/Pres. Low-Temperature Geochemistry  Groundwater* Watershed & Wetland Hydro*	4 4 3  3 4  3 3	Sp Sp F  Sp F  Sp F	GEOL100/110, CHEM 131/132 GEOL 322 GEOL 100/110, CHEM 131/132, GEOL322, and MATH 140 or 220 CHEM131/132, GEOL100, and MATH115 CHEM131/132, GEOL 100/110, GEOL 322, and MATH115 CHEM 131/132, GEOL100/110 Jr. standing	_____ _____ _____ _____ _____ _____ _____ _____
* If not taken to satisfy upper level requirement above					<i>Continued...</i>

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