

# ENSP - Environmental Geosciences and Restoration

Reviewed 2.4.16 – WW

ENSP Core				UM General Education					
Course				Fundamental Studies (15 credits)					
Title				Requirements	Course	Cr/AP/IB/D			
Offered				Distributive Studies (25 credits)					
Grade				Natural Sciences w/Lab (NL)	ENSP Lab Sci	4			
All three: ENSP 101 (NS) ENSP 102 (HS) ENSP 400 (SP)				*May double-count with Distributive Studies					
				Requirements			Course	Cr/Unique	
				I-Series (IS)					
Intro. to Env Science Intro. to EnvPolicy Capstone				Diversity (4-6 credits)*					
				*May double-count with Distributive Studies			Requirements		
Calculus: MATH 140 (MA)				Understanding Plural Societies (UP)					
				or Cultural Competency (CC)			Cr/AP/Unique	3-6	
Statistics (one): BIOM 301 (AR) GEOG306 (AR) STAT 400 (AR)				Experimental Learning (0-3 credits)*					
				* May overlap with major requirements			Requirements		
Intro to Biometrics Quant. Methods Applied Prob and Stat I				An internship is <i>required</i> in this concentration.					
				Course	Cr				
Gen Chemistry I Chem for Engineers				UM Graduation Requirements					
				_____ Up to 6 AP courses <b>may</b> be used for Gen Ed _____ There are <b>at least 40 non-overlapping</b> Gen Ed credits _____ No more than 60 credits earned from Community College _____ Last 30 credits must be earned at Maryland _____ 120+ cumulative credits <i>and</i> 2.0+ cum GPA					
Earth Sciences: ENST 200 (NL) <i>and</i>				Fund of Soil Science <i>and</i>			F _____		
Biology: BSCI 106 (NL)				Princ of Biology II			Sp, F, Su Sp, F		
Govt & Politics (one): ENSP 330 ENSP 340 ENSP 342 GVPT 273 (SP)				Env Law Water: Sci., Ethics, Law: Oceans: Integr Policy Resp Intro to Env Politics			F,S F Sp Sp		
Economics (one): AREC 240 (HS) AREC 241 (HS, IS) ECON 200 (HS)				Sp Fa Sp,F,W,Su			Grade _____ _____ _____		

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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)

BSCI 361	Principles of Ecology	4	F,W,Sp	BSCI106	
GEOL 340	Geomorphology	4	Sp	GEOL 100/110	
GEOL451 <i>or</i> GEOL452	Groundwater Watershed & Wetland Hydrology	3 3	<b>F</b> 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
Techniques and Application: GEOG372 GEOG373	Remote Sensing Geographic Info Systems	3 3	F,W,Sp,Su F,W,Sp,Su		_____ _____
Environmental Restoration: 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 BSCI106; BSCI362, ENST360, or ENST450 BSCI106	_____ _____ _____ _____ _____ _____ _____ _____
Surficial Geology: 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, 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
Deep-Earth Geology:					
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	_____