

ENSP – Soil, Water, and Land Resources

Effective -- Fall 2016

Reviewed 10.12.16 – WW

ENSP Core				General Education		
All				Fundamental Studies (15 credits)		
Course	Title	Offered	Grade	Requirements	Course	Cr
ENSP101 (NS) ENSP102 (HS) ENSP400 (SP)	Intro to Env Science Intro to Env Policy Senior Capstone	Fa Sp Fa,Sp		Academic Writing (AW)		3
Applied Science and Policy (one)				Distributive Studies (25 credits)		
ENSP305 ENSP330 ENSP340 ENSP342 ENSP350	Quant. Methods Environmental Law Sci, Ethics, Law: Water Oceans: Integ. Policy Energy: Science & Policy	Sp Fa, Sp Fa Sp TBA		Requirements		
Calculus (one)				Natural Sciences w/Lab (NL)	ENSP Lab Sci	4
MATH120 (MA) MATH130 (MA) MATH140 (MA)	Elementary Calculus Calculus for Life Sciences Calculus I (<i>recommended</i>)	Fa,Sp,Su Fa,Sp,Su Fa,Sp,Su	Grade	Natural Science (NS)	ENSP 101	3
Statistics (one)				History and/or Social Sci (HS1)	ENSP 102	3
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	Grade	History and/or Social Sci (HS2)		4
Four (4) courses from the 5 groups below:				Humanities (HU1)		3
Biology (req'd)				Humanities (HU2)		3
BSCI160/161 (NL)	Ecology & Evolution/Lab	Fa,Sp,Su	Grade	Scholarship in Practice (SP, major)	ENSP 400	3
Chemistry (req'd)				Scholarship in Practice (SP, non-major)		3
CHEM131/132 (NL)	Gen Chemistry I/Lab	Fa,Sp,Su	Grade	I-Series (6 credits)*		
Earth Science (both)				* May double-count with Distributive Studies		
ENST200 (NL) <i>and</i>	Princ of Soil Science	Fa	_____	Requirements	Course	Cr
GEOG201/211 (NL) <i>or</i> GEO100/110 (NL)	Geog of Env Systems Physical Geology	Fa,Sp,Su Fa,Sp,Su	_____	I- Series (IS)		3
Economics (one)				I- Series (IS)		3
AREC240 (HS) AREC241 (HS, IS) ECON200 (HS)	Intro to Econ and Env Env, Econ, and Policy Princ of Microeconomics	Sp Fa Sp,Fa,W		Diversity (4-6 credits)*		
Geography (one)				* May double-count with Distributive Studies		
GEOG130 (HS) GEOG140 (IS) GEOG170 (NS) GEOG202 (CC)	Developing Countries Natural Disasters Meth of Geospatial Anal Intro to Human Geog	Fa,Su Fa, Sp Fa Sp		Requirements	Course	Cr
ENSP Graduation Requirements				Understanding Plural Societies (UP)		3-6
_____ Students must earn <u>C- or higher</u> in all courses used for ENSP Core and Concentration requirements.				Understanding Plural Societies (UP) <i>or</i> Cultural Competency (CC)		0-3
_____ Students' major GPA must be 2.0 or higher.				Experiential Learning (0-3 credits)*		
_____ Students' major GPA must be 2.0 or higher.				* May overlap with major requirements		
ENSP Graduation Requirements				Requirements	Course	Cr
_____ Up to 6 AP courses <u>may</u> be used for Gen Ed				Practical experience is <i>strongly recommended</i> in this concentration		
_____ There are at least 40 non-overlapping Gen Ed credits				Graduation Requirements		
_____ No more than 60 credits earned from Community College				_____ Up to 6 AP courses <u>may</u> be used for Gen Ed		
_____ Last 30 credits must be earned at Maryland				_____ There are at least 40 non-overlapping Gen Ed credits		
_____ 120+ cumulative credits <i>and</i> 2.0+ cum GPA				_____ No more than 60 credits earned from Community College		
_____ 120+ cumulative credits <i>and</i> 2.0+ cum GPA				_____ Last 30 credits must be earned at Maryland		
_____ 120+ cumulative credits <i>and</i> 2.0+ cum GPA				_____ 120+ cumulative credits <i>and</i> 2.0+ cum GPA		

ENSP – Soil, Water, and Land Resources (cont'd)

REQUIREMENTS (18-22 credits): Shaded courses are no longer being offered.

Course	Description	Cr	Offered	Prerequisites	Grade
Select one: ENST 442 GEOG 372	Remote Sensing for AGNR <i>or</i> Remote Sensing	3 3	Sp Sp,Su,W	- -	_____ _____
Select one: GEOG 340 GEOG 340	Geomorphology Geomorphology	4 3	Sp TBA	GEOG 100 Offered Summer or Winter, if offered.	_____ _____
Select one: GEOG 451 GEOG 452 ENST 417*	Groundwater Geology Watershed and Wetland Hydrology Soil Hydrology and Physics	3 3 3	F F F	Check with professor Check with professor ENST 200 & course in physics; check w/prof.	_____ _____ _____
Select two: ENST 308	Skill development: Field Soil Morph – soil judging or intensive field course; ck with advisor.	3	F, Sp, Su	ENST 200	_____
ENST 413	Soil and Water Conservation	3	Sp	ENST 200	_____
ENST 415	GIS Applications in Soil Science	4	Sp	ENST 200	_____
ENST 425	Terrestrial Bioremediation	3	Sp	1 course in Biol. and CHEM 131/132 or dept.	_____
ENST 423	Soil and Water Pollution	3	Sp	ENST 200 and CHEM 231/232 or permission of dept.; check with your advisor	_____
Select two: ENST 411 ENST 414 ENST 417* ENST 421 ENST 422	Depth: Principles of Soil Fertility Soil Morphology Genesis & Class. Soil Hydrology and Physics Soil Chemistry Soil Biochem & Microbial Ecology	3 4 3 4 3	F F F Sp F	ENST 200 or equivalent. ENST 200 ENST 200 & course in physics; or dept. perm. ENST 200 ENST 200, CHEM 105/231 or dept. perm.	_____ _____ _____ _____ _____

RESTRICTED ELECTIVES: At least 3 courses and 9 credits. GEOG373 is strongly recommended.

Course	Description	Cr	Offered	Prerequisites	Grade
ENCE 315	Intro. to Environmental Engineering	3	Sp,F	CHEM 131/132 and PHYS 161.	
ENST 430	Wetland Soils	3	Sp	ENST 200	
ENST 440	Crops, Soils and Civilization	3	Sp	-	
ENST 450	Wetland Ecology	3	F	Meets in even years, e.g., 2016, 2018, etc.	
ENST 451	Water Quality: Field & Lab Meth.	3	Sp	CHEM 131/132 and (CHEM 105/232 or CHEM 231/232)	
GEOG 345	Introduction to Climatology	3	F		
GEOG 373	Geographic Information Systems	3	F,W,Su		
GEOG 475	Advanced Computer Cartography	3	Sp	GEOG 373	
GEOG 472	Remote Sensing	3	Fa	GEOG 372	
GEOG 473	Geog. Info. Sys. and Spatial Anal.	3	Sp	GEOG 373 and GEOG306 or equivalent.	
ENSP 386	Internship	3	Sp,F,Su	Internship proposal approved	

Recommended preparation for GRADUATE SCHOOL in Soil and Water Sciences: MATH 141 *or* MATH 121; PHYS 121 *and* 122; CHEM 231/232 *and* 241/242.

Advisor notes and approved course substitutions: