

ENSP – Environmental Economics

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	Fa, Sp Fa Sp Sp TBA		Professional Writing (PW)		3			
Calculus (one)				I-Series (6 credits)*					
MATH120 (MA) MATH140 (MA)	Elementary Calculus Calculus I (<i>recommended</i>)	Fa,Sp,Su Fa,Sp,Su	Grade	* May double-count with Distributive Studies					
Statistics (one)				Requirements					
See page 2.	See page 2.		Grade	Natural Sciences w/Lab (NL)	ENSP Lab Sci	4			
Four (4) courses from the 5 groups below:				Course			Cr		
				Biology			I- Series (IS)		
BSCI160/161 (NL)	Ecology & Evolution/Lab	Fa,Sp,Su	Grade	* May double-count with Distributive Studies					
Chemistry				Requirements					
CHEM131/132 (NL)	Gen Chemistry I/Lab	Fa,Sp,Su	Grade	Diversity (4-6 credits)*					
Earth Sci (one)				* May double-count with Distributive Studies					
AOSC200/201 (NL) ENST200 (NL) GEOG201/211 (NL) GEOL100/110 (NL) GEOL120/110	Weather & Climate/Lab Fund of Soil Science Geog Environ Sys/Lab* Physical Geology/Lab Environmental Geology <i>*recommended</i>	Fa,Sp Fa Fa,Sp,Su Fa,Sp,Su Fa,Sp	Grade	Requirements					
Economics (one, req'd)				Understanding Plural Societies (UP)					
AREC240 (HS) AREC241 (HS, IS) ECON200 (HS)	Intro to Econ and Env Env, Econ, and Policy Princ of Micro-Econ	Sp Fa F,S,Su,W		* May double-count with major requirements					
Geography (one)				Requirements					
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		Course					
ENSP Graduation Requirements				Cr					
_____ Students must earn <u>C- or higher</u> in all courses used for ENSP Core and Concentration requirements.				Experiential Learning (0-3 credits)*					
_____ Students' major GPA must be 2.0 or higher.				* May overlap with major requirements					
ENSP Graduation Requirements				Requirements					
				<i>Practical experience is not required, but is strongly recommended.</i>					
Graduation Requirements				Graduation Requirements					
_____ Up to 6 AP courses may be used for Gen Ed				_____ Up to 6 AP courses may be used for Gen Ed					
_____ There are at least 40 non-overlapping Gen Ed credits				_____ There are at least 40 non-overlapping Gen Ed credits					
_____ No more than 60 credits earned from Community College				_____ No more than 60 credits earned from Community College					
_____ Last 30 credits must be earned at Maryland				_____ 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					

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ECONOMICS FOUNDATION - Choose Track 1 or Track 2. (13-14 credits)

Track 1: Preparation for PhD programs in Economics and quantitative careers that produce economic analysis. Students who choose this track should strongly consider Area 4 Restricted Electives and/or a Minor in Mathematics.

Course	Description	Cr	Offered	Prerequisites	Grade
ECON 201	Princ of Macro-Economics	3	F,Sp		
MATH141	Calculus II	4	F,Sp	MATH140	
ECON321* or STAT400 *	Economic Statistics Applied Probability and Statistics I	3 3	F,W,Sp,Su F,Sp	ECON200 and 201; MATH140 and 141. MATH141	
ECON326	Intermediate Microecon Analysis	3	F,Sp	ECON200 and 201; MATH140 and 141.	

* These courses fill the ENSP Core Statistics requirement

Track 2: Preparation for Master's programs in Public Policy, Law, and careers that involve decision-making informed by economic analysis.

Course	Description	Cr	Offered	Prerequisites	Grade
ECON201	Princ of Macro-Economics	3	F,Sp		
ECON230* or BMGT230*	Applied Econ Statistics Business Statistics	3 3	F,Sp F,Sp,Su	ECON200 and 201; MATH111 or MATH220;	
ECON300	Methods and Tools for Econ Anal	3	F,Sp	ECON200 and 201; and MATH220	
AREC326	Interm Applied Microecon	3	F,Sp	ECON200 (or AREC240) and 201; Calculus I (MATH220, 130, or 140); and ECON300 (strongly recommended)	

* These courses fill the ENSP Core Statistics requirement

RESTRICTED ELECTIVES INSIDE ECONOMICS (15 credits)

Choose four (4): Speak with your advisor about which courses serve your interests best.

AREC 446	Sustainable Development	3	TBA	ECON326 or AREC326	
AREC 453	Natural Resources and Public Policy	3	F	ECON326 or AREC326	
AREC 454	Economics of Climate Change	3	Sp	ECON326 or AREC326	
AREC 455	Economics of Land Use	3	F	ECON326 or AREC326	
AREC 456	Energy and Environ Economics	3	Sp	ECON326 or AREC326	
ECON 481	Environmental Econ (<i>strongly rec</i>)	3	Sp	ECON 321 and ECON 326.	
ECON 454	Theory of Publ. Fin. & Fiscal Fed	3	F, Sp	ECON 321 and ECON 326.	

Choose one (1): Courses selected here may not “double-count” as Restricted Electives.

AREC 365	Hunger, Pop, and Food Supplies	3	Sp, F		
AREC 382 <i>or</i> ENSP 305	Computer-Based Anal in AREC Applied Quant Methods in ENSP	3 3	Sp Sp	60 credits, Calculus and Statistics	
AREC 430	Intro to Agric and Resource Law	3	Fa		
AREC 433	Food and Agricultural Policy	3	F	ECON326 or AREC326	
AREC 445	Agric Dev., Pop Growth, & Env.	3	Sp	ECON326 or AREC326	
AREC 489L	Agric Water Qual: Policy and Legal Issues	3	Sp		
AREC 422 <i>or</i> ECON 422	Econometrics Econometrics I **	3 3	TBA F, Sp	ECON326 <i>or</i> AREC326 ECON 321 <i>and</i> ECON 326.	
ECON 456	Law and Economics **	3	Sp	ECON326 and [ECON230 or BMGT230].	

** Due to severe over-enrollment in Economics, ENSP students should prepare to enroll in AREC courses in this category.

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RESTRICTED ELECTIVES OUTSIDE ECONOMICS: At least 12 credits in one (1) supporting area below. Other courses are allowed as Restricted Electives with advisor approval *in advance*. Additionally, consider the benefits of Minors in GIS and/or Statistics; note, however, that only 6 credits may overlap between a major and minor; and there may be no overlap between two minors.

>>> **Area 1. Social Science.** *At least 9 credits must be 300- or 400-level.*

Course	Description	Cr	Offered	Prerequisites	Grade
ANTH 266	Changing Climate, Changing Cultures	3	F		
ANTH 450	Theory & Practice of Environ Anthro	3	Sp		
GEOG 335 or 435	Population Geography – renumbered	3	Sp F		
GEOG 421	Regional Geography: China	3	Sp		
GEOG 422	Regional Geography: Sub-Saharan Africa	3	F		
GEOG 423	Regional Geography: Latin America	3	Sp		
GEOG 331	Intro to Human Dimen of Global Chng	3	F	GEOG 201 or 202; or ANTH 220 or 260	
GEOG 332	Economic Geography	3	F		
GEOG 373	Geographic Information Systems	3	F, Su,W	-	
GEOG 415	Land Use, Climate Change and Sust	3	Sp	GEOG 306 or permission.	
GEOG 416	Conceptualizing and Modelling Human-Environment Interaction	3	Sp	GEOG 306 and MATH 220.	
GEOG 431	Culture and Natural Resource Mgt	3	F		
GEOG 437	Political Geography	3	F	-	
GVPT 200	International Political Relations	3	Sp,Su,F,w	GVPT 100 or ENSP102	
GVPT 273	Intro to Environmental Politics	3	Sp		
GVPT 306	Global Ecopolitics	3	Sp	GVPT 200	
GVPT 406	International Political Economy	3	F	GVPT 200	
HIST 405	Environmental History	3	varies		
SOCY 305 or 405	Scarcity and Modern Society	3	Sp	3 credits of sociology	
SOCY 406	Globalization	3	F	6 credits of sociology or dept. perm.	
SOCY 410	Social Demography	3	Sp, F	6 credits of sociology or dept perm	
SOCY 415	Environmental Sociology	3	F	6 credits of sociology or dept perm.	

>>> **Area 2. Earth Science**

Course	Description	Cr	Offered	Prerequisites	Grade
AOSC375 or GEOL375	Intro to the Blue Ocean	3	F	MATH 140	
CHEM231/231	Organic Chemistry I	3/1	Sp, F	CHEM131/132	
ENST 200	Fundamentals of Soil Science	4	F	CHEM131/132 strongly recommended	
ENST 413	Soil and Water Conservation	3	Sp	ENST200	
ENST 423	Soil-Water Pollution	3	Sp	ENST200 and CHEM 231/232 or perm.	
ENST 430	Wetland Soils	3	Sp	ENST 200	
ENST 440	Crops, Soils, and Civilization	3	Sp		
ENST 441	Sustainable Agriculture	3	Fa		
ENST 451	Water Quality: Field and Lab Analysis	3	Sp	CHEM 231/232	
GEOG 301	Adv Geographical Environmental Sys	3	Sp	GEOG 201/211	
GEOG 441	The Coastal Ocean	3	Sp	GEOG 201/211	
GEOL 340	Geomorphology	4	Sp	GEOL 100 or 120, GEOL110	
GEOL 451	Groundwater	3	F	CHEM 131/132, GEOL 100 or 120, GEOL110, and MATH141	
GEOL 452	Watershed and Wetland Hydrology	3	F	CHEM 131/132 and GEOL 100/110 or perm.	
GEOL 453	Ecosystem Restoration	3	F	CHEM131/2, MATH 220 or 140; GEOL100, GEOL120, or ENST200.	
LARC 450	Environmental Resources	3	F	ENST 200 or permission of dept.	

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>>> **Area 3. Life Science** *At least 9 credits must be 300- or 400-level.*

Course	Description	Cr	Offered	Prerequisites	Grade
BSCI 207	Organismal Biology	4	Sp,Su,F	BSCI 170/171, BSCI 160/161 and CHEM 131/132	
BSCI 361	Principles of Ecology	4	Sp	BSCI 160/161 and (MATH 140 or MATH 220)	
BSCI 363	Biol of Conserv and Extinction	3	F	BSCI 160/161	
BSCI 370	Principles of Evolution	3	F	BSCI 160/161	
BSCI 460	Plant Ecology	3	TBA	BSCI 160/161	
BSCI 461	Plant Ecology lab	2	TBA	Pre- or corequisite: BSCI 460	
BSCI 462	Population Ecology	3	F	BSCI 160/161 and MATH 220	
BSCI 473	Marine Ecology	3	F	BSCI 207	
ENST 214	Intro to Fisheries and Wildlife Science	3	F		
ENST 314	Fisheries Mgmt and Sustainability	3	Sp	Spring of “even” years (2016, 2018, etc.)	
ENST 373	Natural History of the Ches Bay	3	F		
ENST 410	Ecosystem Services: Integ. Anal.	3	F	BSCI 361	
ENST 450	Wetland Ecology	3	F	BIOM 301 or permission of dept.	
ENST 460	Principles of Wildlife Mgmt	3	F	-	
ENST 461	Urban Wildlife Management	3	F	-	
ENST 464	Wildlife Habitat Modeling	3	Sp	BSCI361 and GEOG373	
ENST 479	Trop Ecol and Resource Mgmt.	3	Sp		
GEOG 442	Biogeography	3	F	BSCI361 or GEOG301	
PLSC 471	Forest Ecology	3	Sp	BSCI 160/161	

>>> **Area 4. Preparation for Graduate Work in Environmental Economics:** Mathematics, Theory, Econometrics. Note: courses selected here may not “double-count” with courses in the Choose (4) area of Concentration requirements on page 2. Please discuss with your advisor other, additional coursework that may be helpful.

Course	Description	Cr	Offered	Prerequisites	Grade
MATH 240	Introduction to Linear Algebra	4	Sp, Su, F	MATH 141 or equivalent	
MATH 241	Calculus III	4	Sp, Su, F	MATH 141 and MATH 240	
ECON 325	Intermediate Macroeconomics	3	Sp, Su, F	ECON 200 and 201; and MATH141.	
ECON 414	Game Theory	3	Sp, F	ECON306 and [ECON230 or BMGT230]	
ECON 422 or AREC 422	Econometrics I Econometric Applications	3	Sp,F TBA	ECON 321 and [ECON325 or 326] ECON 306 or AREC326	
STAT 401	Applied Probability and Stat II	3	Sp, F	STAT 400	