

ENVIRONMENT & AGRICULTURE – CORE Program

Reviewed: 6.17.14

UM Core: ENGL 101 _____, (HL) _____, (HA) _____, (HL/HA/HO/IE) _____, (SH) _____, Diversity _____
 Adv. Writing _____, Adv. Studies _____, (SB) _____, (SB/IE) _____.

Grading Policy: Environmental Science and Policy students must earn C- grades or higher in all ENSP core courses and in all required courses and restricted electives of the selected area of concentration.

Required from ENSP Core:

Course	Title	Cr	Offered +	Prerequisites	Grade	Completed	Notes
All three: ENSP 101 (PS) ENSP 102 ENSP 400 (AS)	Intro. to Environmental Science Intro. to Environmental Policy Capstone in Env. Sci & Policy	3 3 3	F Sp Sp, F	- - Senior year; ENSP 101 and 102	___ ___ ___	_____ _____ _____	_____ _____ _____
Calculus: MATH 140 (MS) or MATH 220 (MS)	Calculus I (recommended) Elementary Calculus I	4 3	Sp, F, Su Sp, F, Su	dept. perm. or MATH 115 w/C or better dept. perm. or MATH 113, or 115	___ ___	_____ _____	_____ _____
Statistics: BIOM 301 or GEOG 306	Introduction to Biometrics Introduction to Quant. Methods	3 3	Sp, F Sp	MATH 115 -	___ ___	_____ _____	_____ _____
Biology: BSCI 106 (LL)	Principles of Biology II	4	Sp, F, Su	placement in MATH 220 or higher			
Chemistry: CHEM 131/132 (PL)	General Chemistry I	3/1	Sp, F, Su	placement in MATH 220 or higher			
Earth Sciences: ENST 200 (LL)	Fundamentals of Soil Science	4	Fa	CHEM 131/132 or dept. perm.	___	_____	_____
Economics (one): AREC 240 (SB) AREC 241	Intro. to Economics and the Envir. Environment, Econ., and Policy	4 4	Sp Fa	MATH 220 or higher recommended MATH 220 or higher recommended	___	_____	_____

And: At least one course from either Geography or Govt & Politics:

Geography: GEOG 100 (SB) GEOG 130 (SB/D) GEOG 140 (PS) GEOG 202 (SB)	Intro to Geography Developing Countries (<i>recommended</i>) Natural Disasters Intro to Human Geography	3 3 3 3	F F, Su F Sp	- - - -	___ ___ ___ ___	_____ _____ _____ _____	_____ _____ _____ _____
Govt & Politics (one): ENSP 330 ENSP 340 ENSP 342 GVPT 273	Introduction to Environmental Law Water: Science, Ethics, and Law Oceans: Integrated Policy Intro. to Environmental Politics	3 3 3 3	F, S F S Sp	Permission of dept; Junior standing. Permission of dept; Junior standing. Permission of dept; Junior standing. GVPT 170 or ENSP 102	___ ___ ___ ___	_____ _____ _____ _____	_____ _____ _____ _____

Required for ENVIRONMENT & AGRICULTURE

Fundamentals and Background (18-19 credits):

Course	Description	Cr	Offered	Prerequisites	Grade	Completed	Notes
ANSC 101/103	Principles of Animal Science and Lab	2/1	F				
BSCI 105	Principles of Biology I	4	F, Sp, Su	MATH 220 placement or higher			
BSCI 222 <i>or</i> PLSC 203	Genetics <i>or</i> Plants, Genes and Biodiversity	4 3	F, Sp, Su Sp	BSCI 105 and one year chemistry BSCI 105			
CHEM 231/232	Organic Chemistry I	4	F, Sp, Su	CHEM 131/132			
PLSC 101	Intro to Crop Science	4	F				

Cartography, Remote Sensing, and GIS – choose 2 courses from those listed below (6 credits): *Grayed out courses are no longer offered.*

Course	Description	Cr	Offered	Prerequisites	Grade	Completed	Notes
GEOG 475	Adv Computer Cartography	3	Sp	GEOG 373			
GEOG 372 <i>or</i> ENST 442	Remote Sensing <i>or</i> Remote Sensing of Ag and Nat Res	3	Sp, Su, W				
GEOG 472	Advanced Remote Sensing	3	Fa	GEOG 372			
GEOG 373 <i>or</i> ENST 415	Geographic Information Systems <i>or</i> GIS Applications in Soil Science	3 4	F, Su, W				
GEOG 473	Adv Geographic Information Systems	3	Sp	GEOG 373			

Internship (3-6 credits):

Course	Description	Cr	Offered	Grade	Completed	Notes
ENSP 386	Internship	3-6	F, Sp, Su			

DEPTH AND FOCUS – Choose five (5) courses in one area, which together with ENSP 386 provides integration and skill development (15-19 credits):

>>> Area 1. Crop production and plant protection

Course	Description	Cr	Offered	Prerequisites	Grade	Completed	Notes
BSCI 361 <i>or</i> GEOG 342	Ecology <i>or</i> Biogeography	4 3	Sp Sp	BSCI 106			
PLSC 442 <i>or</i> PLSC 400	Plant Physiology <i>or</i> Principles of Plant Physiology	4 3	F Sp				
PLSC 420	Plant Pathology	4	F	CHEM 104 or 231/232, and ENST 201			
ENST 411	Soil Fertility	3	Sp	ENST 200			
ENST 413 <i>or</i> ENST 423	Soil-Water Conservation <i>or</i> Soil-Water Pollution	4 3	F F	ENST 200 and CHEM 104 or perm.			
ENST 441	Sustainable Agriculture	3	F				
PLSC 403	Crop Breeding	3	Sp	BSCI 222 or permission			
PLSC 406	Forage Crops	3	Sp	BSCI 105			
PLSC 407	Cereal and Oil Crops	3	F	BSCI 105 and PLSC 101			
PLSC 453	Weed Science	3	F				

Cont'd →

>>> Area 2. Human dimensions

Course	Description	Cr	Offered	Prerequisites	Grade	Completed	Notes
AREC 306	Farm Management	3	F				
AREC 365	World Hunger, Pop, and Food Supplies	3	F, Sp				
AREC 445	Agri Devmt, Pop Growth, and Env	3	Sp	ECON 200 and 201 or perm.			
AREC 455	Land Use Economics	3	F	ECON 200, 201 and 306 or perm			
ECON 315	Econ Dev of Underdeveloped Areas	3	Sp	ECON 200 and 201 or perm.			
GEOG 312	Geog of US and Canada	3	Sp				
GEOG 3xx	Regional Geog (Latin America and Caribbean; Africa; or other underdeveloped regions).	3	varies				
GEOG 431	Culture and Natural Resource Management	3	F				
GVPT 306	Global Ecopolitics	3	Sp	GVPT 200			
ENST 440	Soils, Crops and Civilization	3	Sp				
ENST 441	Sustainable Agriculture	3	F				
PLSC 303	International Crop Production	3	Sp	BSCI 105			
SOCY 305	Scarcity in Modern Society	3	F,Sp	3 cr SOCY			

>>> Advisor notes, approved course substitutions, etc.