

ENSP – Soil, Water, and Land Resources

Reviewed 6.3.15 - WW

| ENSP Core | | | | UM General Education | | | | | | | | | | |
|--|--|--|--|---|--------|------------|--|---|--|--|--|---|--|--|
| Course | | | | Fundamental Studies (15 credits) | | | | | | | | | | |
| Title | | | | Requirements | Course | Cr/AP/IB/D | | | | | | | | |
| Offered | | | | Academic Writing (AW) | | | | | | | | | | |
| Grade | | | | Professional Writing (PW) | | | | | | | | | | |
| All ENSP101 (NS) ENSP102 (HS) ENSP400 (SP) | | | | Intro to Env Science | | | | | | | | | | |
| | | | | Intro to Env Policy | | | | | | | | | | |
| | | | | Capstone | | | | | | | | | | |
| Calculus (one) MATH220 (MA) MATH140 (MA) | | | | Oral Communication (OC) | | | | | | | | | | |
| | | | | Math (MA) | | | | | | | | | | |
| | | | | Analytical Reasoning (AR) | | | | | | | | | | |
| Statistics (one) BIOM301 (AR) GEOG306 (AR) | | | | Calculus | | | | | | | | | | |
| | | | | GEOG306 | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| All <u>4</u> courses below: | | | | Distributive Studies (25 credits) | | | | | | | | | | |
| | | | | Requirements | | | | | | | | | | |
| | | | | Natural Sciences w/Lab (NL) | | | | | | | | | | |
| | | | | Natural Science (NS) | | | | | | | | | | |
| | | | | History and/or Social Sci (HS1) | | | | | | | | | | |
| | | | | History and/or Social Sci (HS2) | | | | | | | | | | |
| | | | | Humanities (HU1) | | | | | | | | | | |
| | | | | Humanities (HU2) | | | | | | | | | | |
| | | | | Scholarship in Practice (SP, major) | | | | | | | | | | |
| | | | | Scholarship in Practice (SP, non-major) | | | | | | | | | | |
| Choose <u>1</u> course from 2 categories below: | | | | I-Series (6 credits)* | | | | | | | | | | |
| | | | | * May double-count with Distributive Studies | | | | | | | | | | |
| | | | | Requirements | | | | | | | | | | |
| | | | | I- Series (IS) | | | | | | | | | | |
| | | | | I- Series (IS) | | | | | | | | | | |
| | | | | * May double-count with Distributive Studies | | | | Diversity (4-6 credits)* | | | | | | |
| | | | | | | | | Requirements | | | | | | |
| | | | | | | | | Understanding Plural Societies (UP) | | | | | | |
| | | | | | | | | Understanding Plural Societies (UP) or Cultural Competency (CC) | | | | | | |
| | | | | | | | | * May overlap with major requirements | | | | Experiential Learning (0-3 credits)* | | |
| Requirements | | | | | | | | | | | | | | |
| An internship is <i>strongly recommended</i> , but is not required in this concentration. | | | | | | | | | | | | | | |
| ENSP Grade Requirement _____ Students must earn <u>C- or higher</u> in all courses used for ENSP Core and Concentration requirements. _____ Students' major GPA must be 2.0 or higher. | | | | | | | | | | | | Graduation Requirements | | |
| | | | | | | | | | | | | _____ Up to 6 AP courses may be used for Gen Ed | | |
| | | | | | | | | | | | | _____ There are at least 40 non-overlapping 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 | | | | | | | | | | |

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

REQUIREMENTS (18-22 credits): **Shaded courses** are no longer being offered; the curriculum is currently being revised.

| Course | Description | Cr | Offered | Prerequisites | Grade |
|--|--|-----------------------|------------------------|--|---|
| Select <u>one</u> : ENST 442 GEOG 372 | Remote Sensing for AGNR <i>or</i> Remote Sensing | 3 3 | Sp Sp,Su,W | - - | _____ _____ |
| Select <u>one</u> : GEOG 340 GEOG 340 | Geomorphology Geomorphology | 4 3 | Sp TBA | GEOG 100 Offered Summer or Winter, if offered. | _____ _____ |
| Select <u>one</u> : 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 <u>two</u> : 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 <u>two</u> : 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 221; PHYS 121 *and* 122; CHEM 231/232 *and* 241/242.

Advisor notes and approved course substitutions: