

ENSP – Soil, Water, and Land Resources

Updated 9/16/19 – ABM

NOTE: always refer to the Schedule of Classes on Testudo for the most up-to-date information regarding course offerings, prerequisites and restrictions.

| ENSP Core | | | | General Education | | |
|---|---|----------------|--------------|---|---------------|-----------|
| All | | | | Fundamental Studies (15 credits) | | |
| Course | Title | Offered | Grade | Requirements | Course | Cr |
| ENSP101 (NS) | Intro to Env Science | Fa | | Academic Writing (AW) | | 3 |
| ENSP102 (HS) | Intro to Env Policy | Sp | | Professional Writing (PW) | | 3 |
| ENSP400 (SP) | Senior Capstone | Fa,Sp | | Oral Communication (OC) | | 3 |
| Applied Science and Policy (one) | | | | Distributive Studies (25 credits) | | |
| ENSP305 | Applied Quant. Methods in Env. Sci & Policy | Sp | | Requirements | | |
| ENSP330 | Environmental Law | Fa, Sp | | Natural Sciences w/Lab (NL) | ENSP Lab Sci | 4 |
| ENSP340 | Sci, Ethics, Law: Water | Fa | | Natural Science (NS) | ENSP 101 | 3 |
| ENSP342 | Oceans: Integ. Policy | Sp | | History and/or Social Sci (HS1) | ENSP 102 | 3 |
| ENSP350 | Energy: Science & Policy | TBA | | History and/or Social Sci (HS2) | | 4 |
| Calculus (one) | | | | Humanities (HU1) | | |
| MATH120 (MA) <i>or</i> | Elementary Calculus | Fa,Sp,Su | Grade | Humanities (HU2) | | 3 |
| MATH140 (MA) | Calculus I (<i>recommended</i>) | Fa,Sp,Su | | Scholarship in Practice (SP, major) | ENSP 400 | 3 |
| Statistics (one) | | | | Scholarship in Practice (SP, non-major) | | |
| BIOM301 (AR) | Intro to Biometrics | Fa,W,Sp | Grade | | | 3 |
| GEOG306 (AR) | Intro to Quant Methods | Sp,Su, W | | I-Series (6 credits)* | | |
| PSYC200 (AR) | Stat Methods in Psyc | Fa,Sp,Su | | * May double-count with Distributive Studies | | |
| Four (4) courses from the 5 groups below: | | | | Requirements | | |
| Biology (req'd) | | | | I- Series (IS) | | 3 |
| BSCI160/161 (NL) | Ecology & Evolution/Lab | Fa,Sp,Su | Grade | I- Series (IS) | | 3 |
| Chemistry (req'd) | | | | Diversity (4-6 credits)* | | |
| CHEM131/132 (NL) | Gen Chemistry I/Lab | Fa,Sp,Su | Grade | * May double-count with Distributive Studies | | |
| Earth Science (both) | | | | Requirements | | |
| ENST200 (NL) <i>and</i> | Princ of Soil Science | Fa | — | Understanding Plural Societies (UP) | | 3-6 |
| GEOG201/211 (NL) <i>or</i> | Geog of Env Systems | Fa,Sp,Su | — | Understanding Plural Societies (UP) <i>or</i> Cultural Competency (CC) | | 0-3 |
| GEOL100/110 (NL) | Physical Geology | Fa,Sp,Su | | Experiential Learning (0-3 credits)* | | |
| Economics (one) | | | | * May overlap with major requirements | | |
| AREC240 (HS) | Intro to Econ and Env | Sp | | Requirements | | |
| AREC241 (HS, IS) | Env, Econ, and Policy | Fa | | Practical experience is <i>strongly recommended</i> in this concentration | | |
| ECON200 (HS) | Princ of Microeconomics | Sp,Fa,W | | Graduation Requirements | | |
| Geography (one) | | | | Up to 6 AP courses may be used for Gen Ed | | |
| GEOG130 (HS) | Developing Countries | Fa,Su | | No more than 60 credits earned from Community College | | |
| GEOG140 (IS) | Natural Disasters | Fa, Sp | | Last 30 credits must be earned at Maryland | | |
| GEOG170 (NS) | Meth of Geospatial Anal | Fa | | 120+ cumulative credits <i>and</i> 2.0+ cum GPA | | |
| GEOG202 (CC) | Intro to Human Geog | Sp | | | | |
| ENSP Graduation Requirements | | | | | | |
| Students must earn <u>C-</u> or <u>higher</u> in all courses used for ENSP Core and Concentration requirements. | | | | | | |
| Students' major GPA must be 2.0 or higher. | | | | | | |

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: GEOG372 | Remote Sensing | 3 | F,Su,W | - | _____ |
| Select one: GEOG340 | Geomorphology | 4 | Sp | GEOL100 | _____ |
| GEOG340 | Geomorphology | 3 | TBA | Offered Summer or Winter, if offered. | _____ |
| Select one: GEOL451 | Groundwater Geology | 3 | F | Check with professor | _____ |
| GEOL452 | Watershed and Wetland Hydrology | 3 | F | Check with professor | _____ |
| ENST417* | Soil Hydrology and Physics | 3 | F | ENST200 & course in physics; check w/prof. | _____ |
| Select two: ENST301, | Skill development: Field Soil Morph I | 1 | Sp | Permission of dept | _____ |
| ENST302, | Field Soil Morph II | 1 | Sp | Permission of dept | _____ |
| & ENST303 | Field Soil Morph II | 1 | Sp | Permission of dept | _____ |
| | <i>soil judging or intensive field course; ck with advisor.</i> | 1 | | | _____ |
| ENST415 | Renewable Energy | 3 | F | CHEM131, PHYS121 & MATH113; perm of dept. | _____ |
| ENST423 | Soil and Water Pollution | 3 | Sp | ENST200 and CHEM231/232 or permission of dept.; check with your advisor | _____ |
| Select two: ENST411 | Depth: Principles of Soil Fertility | 3 | F | ENST200 or equivalent. | _____ |
| ENST414 | Soil Morphology Genesis & Class. | 4 | F | ENST200 | _____ |
| ENST417* | Soil Hydrology and Physics | 3 | F | ENST200 & course in physics; or dept. perm. | _____ |
| ENST421 | Soil Chemistry | 4 | Sp | ENST200 | _____ |
| ENST422 | Soil Biochem & Microbial Ecology | 3 | F | ENST200 or dept. perm | _____ |

RESTRICTED ELECTIVES: At least 3 courses and 9 credits.

Students may suggest additions to this list by bringing a course syllabus to the faculty advisor and explaining how the course relates to their long-term academic or career interests.

| Course | Description | Cr | Offered | Prerequisites | Grade |
|---------|------------------------------------|----|---------------|---|-------|
| ENCE310 | Introduction to Env. Engineering | 3 | Fa, Sp | PHYS260 and ENCE215; and perm. of dept. | |
| ENST430 | Wetland Soils | 3 | Sp | ENST200 | |
| ENST440 | Crops, Soils and Civilization | 3 | Sp | - | |
| ENST450 | Wetland Ecology | 3 | F | Meets in even years, e.g., 2016, 2018, etc. | |
| GEOG345 | Introduction to Climatology | 3 | F | | |
| GEOG373 | Geographic Information Systems | 3 | Sp,F,W, Su | <i>*recommended</i> | |
| GEOG475 | Advanced Computer Cartography | 3 | Sp | GEOG 373 | |
| GEOG472 | Remote Sensing | 3 | Fa | GEOG 372 | |
| GEOG473 | Geog. Info. Sys. and Spatial Anal. | 3 | Sp | GEOG 373 and GEOG306 or equivalent. | |
| ENSP386 | 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: