

ENSP – Environmental Geosciences & Restoration

Updated 11.14.19 - 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 | | | |
|--|--|---|--------------|
| Course | Title | Offered | Grade |
| All three ENSP101 (NS) ENSP102 (HS) ENSP400 (SP) | Intro to Env Science Intro to Env Policy Senior Capstone | Fa Sp Fa,Sp | |
| Applied Science and Policy (one) ENSP305 ENSP306 ENSP330 ENSP340 ENSP342 ENSP350 ENSP370 | Applied Spatial Methods Qual Research/Env Sci Environmental Law Sci, Ethics, Law: Water Oceans: Integ. Policy Energy: Science & Policy Environmental Justice | Sp Fa Fa, Sp Fa Sp TBA Sp | |
| Calculus MATH140 (MA) | Calculus I | Fa,Sp,Su | Grade |
| Statistics (pick one) BIOM301 (AR) GEOG306 (AR) PSYC200 (AR) | Intro to Biometrics Intro to Quant Methods Stat Methods in Psyc | Fa,W,Sp Sp,Su, W Fa,Sp,Su | Grade |
| One course from each of the following: | | | |
| Biology (req'd) BSCI160/161 (NL) | Ecology & Evolution/Lab | Fa,Sp,Su | Grade |
| Chemistry (req'd) CHEM131/132 (NL) | Gen Chemistry I/Lab | Fa,Sp,Su | Grade |
| Earth Sci (req'd, both) GEOL100/110 (NL) <i>or</i> GEOL120/110 (NL) <i>and</i> ENST200 (NL) | Physical Geology/Lab or Environ Geology/Lab Princ of Soil Science | Fa,Sp,Su Fa,Sp,Su Fa, Sp | Grade |
| Economics (pick one) AREC240 (HS) AREC241 (HS, IS) ECON200 (HS) | Intro to Econ and Env Env, Econ, and Policy Princ of Microeconomics | Fa Sp Fa,W,Sp,Su | Grade |
| ENSP Graduation Requirements | | | |
| _____ 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. | | | |

| General Education | | |
|---|--------------|-----|
| Fundamental Studies (15 credits) | | |
| Requirements | Course | Cr |
| Academic Writing (AW) | | 3 |
| Professional Writing (PW) | | 3 |
| Oral Communication (OC) | | 3 |
| Math (MA) | Calculus | 3-4 |
| Analytical Reasoning (AR) | Statistics | |
| Distributive Studies (25 credits) | | |
| Requirements | Course | Cr |
| Natural Sciences w/Lab (NL) | ENSP Lab Sci | 4 |
| Natural Science (NS) | ENSP 101 | 3 |
| History and/or Social Sci (HS1) | ENSP 102 | 3 |
| History and/or Social Sci (HS2) | | 4 |
| Humanities (HU1) | | 3 |
| Humanities (HU2) | | 3 |
| Scholarship in Practice (SP, major) | ENSP 400 | 3 |
| Scholarship in Practice (SP, non-major) | | 3 |
| I-Series (6 credits)* | | |
| * May double-count with Distributive Studies | | |
| Requirements | Course | Cr |
| I- Series (IS) | | 3 |
| I- Series (IS) | | 3 |
| Diversity (4-6 credits)* | | |
| * May double-count with Distributive Studies | | |
| Requirements | Course | Cr |
| Understanding Plural Societies (UP) | | 3-6 |
| Understanding Plural Societies (UP) <i>or</i> Cultural Competency (CC) | | 0-3 |
| Experiential Learning (0-3 credits)* | | |
| * May overlap with major requirements | | |
| Requirements | Course | Cr |
| Practical experience is <i>required</i> in this concentration | | |
| Graduation Requirements | | |
| _____ <u>Up to 6 AP courses</u> may be used for Gen Ed | | |
| _____ 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 - Environmental Geosciences and Restoration (p. 2 of 3)

REQUIREMENTS:

BASIC SCIENCES (3 requirements, 12 credits)

| Course | Description | Cr | Offered | Prerequisites | Grade |
|--------------|------------------------------|----|---------|---------------|-------|
| CHEM 231/232 | Organic Chemistry I | 4 | Sp,F,Su | CHEM 131/132 | |
| MATH141 | Calculus II | 4 | Sp,F,Su | MATH140 | |
| PHYS161 | Gen Physics: Mech & Part Dyn | 3 | Sp,F,Su | MATH141 | |
| PHYS261 | Phys lab | 1 | Sp,F,Su | PHYS161 | |

UPPER LEVEL REQUIREMENTS (5 courses, 17 credits): Note that it's not possible to take all three of GEOL451, 452 and 453 during the same semester. Please consult with your EGR advisor ASAP after declaring this concentration to schedule your courses appropriately.

| | | | | | |
|------------------------------|--|--------|---------|---|--|
| BSCI 361 | Principles of Ecology | 4 | F,W,Sp | BSCI 160/16, and Calculus | |
| GEOL 340 | Geomorphology | 4 | Sp | GEOL 100/110 | |
| GEOL451 <i>or</i> GEOL452 | Groundwater Watershed & Wetland Hydrology | 3 3 | F F | CHEM 131/132, GEOL100/110, MATH141 Jr. standing | |
| GEOL453 | Princ and Prac of Ecosys Rest | 3 | F | MATH220 or 140; GEOL100 or 120, or ENST200. | |
| ENSP 386 | Internship | 3 | F,Sp,Su | Approved internship proposal | |

AREAS OF DEPTH - at least 5 classes and 15 credits, including _____ a minimum of 6 cr from each of two areas
- or - _____ a minimum of 9 cr in one area

| Course | Description | Cr | Offered | Prerequisites | Grade |
|---|---|----|-----------|------------------------------------|-------|
| Techniques and Application: GEOG272 | Introduction to Earth Observation Science (<i>formerly GEOG372 Remote Sensing</i>) Geographic Info Systems | 3 | F,W, Su | | _____ |
| GEOG373 | | 3 | F,W,Sp,Su | | _____ |
| Environmental Restoration: ENST 414 | Soil Morph Genesis and Classif. | 4 | F | ENST 200 | _____ |
| ENST 421 | Soil Chemistry | 4 | Sp | ENST 200 | _____ |
| ENST 422 | Soil Biochem & Microbial Ecol. | 3 | Sp | ENST 200 | _____ |
| ENST 423 | Soil-Water Pollution | 3 | F | ENST 200 | _____ |
| ENST 430 | Wetland Soils | 3 | Sp | ENST 200 | _____ |
| ENST 450 | Wetland Ecology | 3 | F | BIOM301 | _____ |
| ENST452 | Wetland Creation and Restoration | 3 | Sp | BSCI 160/161; BSCI362, ENST360, or | _____ |
| PLSC471 | Forest Ecology | 3 | Sp | ENST450 or BSCI 160/161 | _____ |

| | | | | | |
|---|----------------------------------|---|--------------|--|---------------------|
| Surficial Geology: | | | | | |
| GEOL 322 | Mineralogy | 4 | Sp | GEOL100/110, CHEM 131/132 | _____ |
| GEOL 342 | Sedimentation and Stratigraphy | 4 | F | GEOL 322 | _____ |
| GEOL 436 | Biogeochemistry | 3 | F, odd years | GEOL 100/110, CHEM 131/132, GEOL322, and MATH 140 or 220 | _____ |
| GEOL 437 | Global Climate Change Past/Pres. | 3 | Sp | CHEM131/132, GEOL100, and MATH115 | _____ |
| GEOL 444 | Low-Temperature Geochemistry | 4 | F | CHEM131/132, GEOL 100/110, GEOL 322, and MATH115 | _____ |
| GEOL451* | Groundwater* | 3 | F | CHEM 131/132, GEOL100/110 | _____ |
| GEOL452* | Watershed & Wetland Hydro* | 3 | F | Jr. standing | _____ |
| * If not taken to satisfy upper level requirement above | | | | | |
| | | | | | <i>Continued...</i> |

ENSP - Environmental Geosciences and Restoration (p. 3 of 3)

| Course | Description | Cr | Offered | Prerequisites | Grade |
|----------------------------|-------------------------------|----|---------|---|-------|
| Deep-Earth Geology: | | | | | |
| GEOL102 | Historical Geology | 4 | Sp | GEOL100 or GEOL120 | _____ |
| GEOL341 | Structural Geology | 4 | Sp | GEOL102 | _____ |
| GEOL423 | Optical Mineralogy | 3 | F | GEOL100 or GEOL120, GEOL322, CHEM131/132 | _____ |
| GEOL443 | Petrology | 4 | Sp | GEOL100 or GEOL120, GEOL322, GEOL423, CHEM131/132 | _____ |
| GEOL445 | High-Temperature Geochemistry | 4 | F | MATH115; GEOL100; GEOL322; CHEM131 and CHEM132 | _____ |
| GEOL446 | Geophysics | 3 | F | MATH140, MATH141 | _____ |
| GEOL455 | Marine Geophysics | 3 | F | GEOL100 or GEOL120, MATH141, PHYS141 or PHYS161 | _____ |
| GEOL456 | Engineering Geology | 3 | Sp | GEOL100 or GEOL120, MATH141, PHYS141 or PHYS161 | _____ |
| GEOL457 | Seismology | 3 | Sp | GEOL100 or GEOL120, MATH141 | _____ |