

# ENSP - Environment and Agriculture

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

## ENSP Core

| Course                                                                                                               | Title                                                                                                                                                                          | Grade |
|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| <b>All three</b><br>ENSP101 (NS)<br>ENSP102 (HS)<br>ENSP400 (SP)                                                     | Intro to Env Science<br>Intro to Env Policy<br>Senior Capstone                                                                                                                 |       |
| <b>Applied Science and Policy (one)</b><br>ENSP305<br>ENSP306<br>ENSP330<br>ENSP340<br>ENSP342<br>ENSP350<br>ENSP370 | Applied Spatial Methods<br>Qual Research/Env Sci<br>Environmental Law<br>Sci, Ethics, Law: Water<br>Oceans: Integ. Policy<br>Energy: Science & Policy<br>Environmental Justice |       |
| <b>Calculus (pick one)</b><br>MATH120 (MA) or<br>MATH140 (MA)                                                        | Elementary Calculus<br>Calculus I ( <i>recommended</i> )                                                                                                                       |       |
| <b>Statistics (pick one)</b><br>BIOM301 (AR)<br>GEOG306 (AR)<br>PSYC200 (AR)                                         | Intro to Biometrics<br>Intro to Quant Methods<br>Stat Methods in Psyc                                                                                                          |       |

### Four (4) courses from the 5 groups below:

|    |                                                                                            |                                                                                              |       |
|----|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------|
| 1. | <b>Biology (req'd)</b><br>BSCI160 &<br>BSCI161 or BSCII80                                  | Ecology & Evolution<br>Evolution lab or Princ. Bio. Lab                                      | Grade |
| 2. | <b>Chemistry (req'd)</b><br>CHEM131/132(NL)                                                | Gen Chemistry I/Lab                                                                          | Grade |
| 3. | <b>Earth Sci (req'd)</b><br>ENST 200 (NL)                                                  | Princ of Soil Science                                                                        | Grade |
| 4. | <b>Economics (pick one)</b><br>AREC240 (HS)<br>AREC241 (HS, IS)<br>ECON200 (HS)            | Intro to Econ and Env<br>Env, Econ, and Policy<br>Princ of Microeconomics                    | Grade |
| 5. | <b>Geography (pick one)</b><br>GEOG130 (HS)<br>GEOG140 (IS)<br>GEOG170 NS)<br>GEOG202 (CC) | Development Geography<br>Natural Disasters<br>Meth of Geospatial Anal<br>Intro to Human Geog | Grade |

## ENSP Graduation Requirements

\_\_\_\_\_ Students must earn C- or higher 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)<br>or 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 |        |    |

## ENSP – Environment and Agriculture (cont'd)

### REQUIREMENTS:

#### >>> Fundamentals and Background (5 courses, 18-19 credits):

| Course                         | Description                                          | Cr     | Prerequisites/Notes                                                     | Grade |
|--------------------------------|------------------------------------------------------|--------|-------------------------------------------------------------------------|-------|
| ANSC 101/103                   | Principles of Animal Science and Lab                 | 3/1    | Must be declared in ENSP-E&A                                            |       |
| BSCI 170                       | Cellular and Molecular Biology                       | 3      | MATH 120 placement or higher. BSCI171 lab now incorporated into BSCI180 |       |
| BSCI 222 <i>or</i><br>PLSC 203 | Genetics <i>or</i><br>Plants, Genes and Biodiversity | 4<br>3 | BSCI160/161, BSCI 170//171 & CHEM131/132<br>BSCI 170/171                |       |
| CHEM 231/232                   | Organic Chemistry I                                  | 4      | CHEM 131/132                                                            |       |
| PLSC 112/113                   | Intro. Crop Science & Lab                            | 4      |                                                                         |       |

#### >>> Cartography, Remote Sensing, and GIS: Choose 2 courses (6 credits)

| Course   | Description                               | Cr | Prerequisites/Notes              | Grade |
|----------|-------------------------------------------|----|----------------------------------|-------|
| GEOG 475 | Adv Computer Cartography                  | 3  | GEOG 373                         |       |
| GEOG 272 | Introduction to Earth Observation Science | 3  | Formerly GEOG372: Remote Sensing |       |
| GEOG 373 | Geographic Information Systems            | 3  |                                  |       |
| GEOG 472 | Advanced Remote Sensing                   | 3  | GEOG 372                         |       |
| GEOG 473 | Adv Geographic Information Systems        | 3  | GEOG 373                         |       |

#### >>> Internship (3 credits):

| Course   | Description | Cr  | Grade |
|----------|-------------|-----|-------|
| ENSP 386 | Internship  | 3-6 |       |

### RESTRICTED ELECTIVES (15-19 credits): Choose five (5) courses in one area.

#### >>> Area 1. Crop production and plant protection

| Course   | Description             | Cr | Prerequisites/Notes                                        | Grade |
|----------|-------------------------|----|------------------------------------------------------------|-------|
| BSCI 361 | Ecology                 | 4  | BSCI 160/161, Calculus                                     |       |
| ENST 411 | Soil Fertility          | 3  | ENST 200                                                   |       |
| ENST 423 | Soil-Water Pollution    | 3  | ENST 200 and CHEM 104 or perm.                             |       |
| ENST 441 | Sustainable Agriculture | 3  |                                                            |       |
| PLSC400  | Plant Physiology        | 4  | BSCI170/171, CHEM231/232                                   |       |
| PLSC405  | Agroecology             | 3  |                                                            |       |
| PLSC407  | Advanced Crop Science   | 3  | PLSC112, PLSC113, BSCI160, BSCI161, and MATH113 or higher. |       |
| PLSC411  | Plant Genetics          | 3  | BSCI171/171                                                |       |
| PLSC420  | Plant Pathology         | 4  | CHEM131/132                                                |       |
| PLSC 453 | Weed Science            | 3  |                                                            |       |

#### >>> Area 2. Human dimensions

| Course   | Description                                                | Cr | Prerequisites/Notes                                         | Grade |
|----------|------------------------------------------------------------|----|-------------------------------------------------------------|-------|
| AREC 306 | Farm Management                                            | 3  |                                                             |       |
| AREC 365 | World Hunger, Pop, and Food Supplies                       | 3  |                                                             |       |
| AREC345  | Global Poverty and Economic Development                    | 3  |                                                             |       |
| AREC 445 | Agri Devmt, Pop Growth, and Env                            | 3  | ECON 200, 201 and AREC326 or perm                           |       |
| AREC 455 | Land Use Economics                                         | 3  | ECON 200, 201 and AREC326 or perm                           |       |
| ENST440  | Soils, Crops and Civilization                              | 3  |                                                             |       |
| ENST441  | Sustainable Agriculture                                    | 3  |                                                             |       |
| GEOG330  | Society & Sust. in a Time of Great Change                  | 3  |                                                             |       |
| GEOG331  | Intro. Human Dimensions of Global Change                   | 3  | ANTH220, ANTH260, GEOG202, or GEOG201; or perm of GEOG dept |       |
| GEOG 431 | Culture and Natural Resource Mgmt                          | 3  |                                                             |       |
| GVPT 306 | Global Ecopolitics                                         | 3  | GVPT 200                                                    |       |
| LARC151  | Urban Agriculture: Designing & Assessing Edible Landscapes | 3  |                                                             |       |
| PLSC 303 | Global Food Systems                                        | 3  | BSCI 170/171                                                |       |
| SOCY 405 | Scarcity in Modern Society                                 | 3  | 6 credits in SOCY                                           |       |

**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.**