

# BIODIVERSITY & CONSERVATION BIOLOGY – 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. Biodiversity is sponsored by the College of Computer, Mathematical, and Natural Sciences (CMNS). *Effective Fall 2010, students must meet LEP requirements. ENSP/Biodiversity students only may be admitted to CMNS with MATH220 and 221. MATH130 and 131 are highly recommended. CMNS/Biodiversity Gateway courses are indicated in RED. Additional details here: <http://cmns.umd.edu/cmnsmajorchange>*

## Required from ENSP Core:

| Course                   | Title                             | Cr  | Offered   | Prerequisites                     | Grade | Completed | Notes |
|--------------------------|-----------------------------------|-----|-----------|-----------------------------------|-------|-----------|-------|
| <b>All three:</b>        |                                   |     |           |                                   |       |           |       |
| ENSP 101 (PS)            | Intro. to Environmental Science   | 3   | F         | -                                 | ___   | _____     | _____ |
| ENSP 102                 | Intro. to Environmental Policy    | 3   | Sp        | -                                 | ___   | _____     | _____ |
| ENSP 400 (AS)            | Capstone in Env. Sci & Policy     | 3   | Sp, F     | Senior year; ENSP 101 and 102     | ___   | _____     | _____ |
| <b>Calculus:</b>         |                                   |     |           |                                   |       |           |       |
| MATH 140 (MS) <i>or</i>  | Calculus I                        | 4   | F, Sp, Su | MATH 115 w/C or better            | ___   | _____     | _____ |
| MATH 130 (MS)            | Calculus I for Life Sciences      | 4   | F, Sp, Su | MATH 113 or 115 with C or better. | ___   | _____     | _____ |
| MATH 220 (MS)            | Elementary Calculus I             | 3   | F, Sp, Su | MATH 113 or 115.                  | ___   | _____     | _____ |
| <b>Statistics (one):</b> |                                   |     |           |                                   |       |           |       |
| BIOM 301                 | Introduction to Biometrics        | 3   | Sp, F     | MATH 115                          | ___   | _____     | _____ |
| GEOG 306                 | Introduction to Quant. Methods    | 3   | Sp        | -                                 | ___   | _____     | _____ |
| PSYC 200                 | Statistical Methods in Psychology | 3   | F, Sp, Su | PSYC 100, MATH 111 or 140 or 220  | ___   | _____     | _____ |
| <b>Biology:</b>          |                                   |     |           |                                   |       |           |       |
| BSCI 106 (LL)            | Principles of Biology II          | 4   | F, Sp, Su | placement in MATH 220 or higher   | ___   | _____     | _____ |
| <b>Chemistry:</b>        |                                   |     |           |                                   |       |           |       |
| CHEM 131/132 (PL)        | General Chemistry I               | 3/1 | F, Sp, Su | placement in MATH 220 or higher   | ___   | _____     | _____ |
| <b>Earth Sciences:</b>   |                                   |     |           |                                   |       |           |       |
| GEOG 201/211 (PL)        | Geography of Env. Systems/Lab.    | 3/1 | F, Sp, Su | -                                 | ___   | _____     | _____ |

## And: One (1) course from 2 of the next 3 groups:

|                                   |                                    |   |           |                                      |     |       |       |
|-----------------------------------|------------------------------------|---|-----------|--------------------------------------|-----|-------|-------|
| <b>Economics (one):</b>           |                                    |   |           |                                      |     |       |       |
| AREC 240 (SB)                     | Intro. to Economics and the Envir. | 4 | Sp        | MATH 220 or higher recommended       | ___ | _____ | _____ |
| AREC 241                          | Environment, Econ., and Policy     | 4 | Fa        | MATH 220 or higher recommended       | ___ | _____ | _____ |
| ECON 200 (SB)                     | Principles of Micro-Economics      | 4 | Sp, F, Su | MATH 110 or higher                   | ___ | _____ | _____ |
| <b>Geography (one):</b>           |                                    |   |           |                                      |     |       |       |
| GEOG 100 (SB)                     | Intro to Geography                 | 3 | F         | -                                    | ___ | _____ | _____ |
| GEOG 130 (SB/D)                   | Developing Countries               | 3 | Fa,Su     | -                                    | ___ | _____ | _____ |
| GEOG 140 (PS)                     | Natural Disasters                  | 3 | F         | -                                    | ___ | _____ | _____ |
| GEOG 202 (SB)                     | Intro to Human Geography           | 3 | Sp        | -                                    | ___ | _____ | _____ |
| <b>Govt &amp; Politics (one):</b> |                                    |   |           |                                      |     |       |       |
| ENSP 330                          | Introduction to Environmental Law  | 3 | F, S      | Permission of dept; Junior standing. | ___ | _____ | _____ |
| ENSP 340                          | Water: Science, Ethics, and Law    | 3 | F         | Permission of dept; Junior standing. | ___ | _____ | _____ |
| ENSP 342                          | Oceans: Integrated Policy          | 3 | S         | Permission of dept; Junior standing. | ___ | _____ | _____ |
| GVPT 273                          | Intro. to Environmental Politics   | 3 | Sp        | GVPT 170 or ENSP 102                 | ___ | _____ | _____ |

**Required for BIODIVERSITY & CONSERVATION BIOLOGY:**

| Course  | Description                    | Cr  | Offered   | Prerequisites                        | Grade | When | Notes |
|---|--------------------------------|-----|-----------|--------------------------------------|-------|------|-------|
| BSCI 105                                      | Principles of Biology I        | 4   | Sp, F, Su | Placement in MATH 110 or higher.     |       |      |       |
| BSCI 207 <i>if AP cr. for BSCI 105 or 106</i> | Organismal Biology             | 3   | Sp, F     | BSCI 105, BSCI 106 and CHEM          |       |      |       |
| BSCI 222                                      | Principles of Genetics         | 4   | Sp, F, Su | BSCI 105, 1 year college chemistry   |       |      |       |
| BSCI 361                                      | Principles of Ecology          | 4   | Sp, F     | BSCI 106 and (MATH 140 or 220)       |       |      |       |
| BSCI 363                                      | Biology of Cons and Extinction | 3   | Sp, F     | BSCI 106                             |       |      |       |
| BSCI 370                                      | Principles of Evolution        | 3   | F         | BSCI 106                             |       |      |       |
| CHEM 231/232                                  | Organic Chemistry I and Lab    | 3/1 | Sp, F, Su | CHEM 131/132                         |       |      |       |
| CHEM 241/242                                  | Organic Chemistry II and Lab   | 3/1 | Sp, F, Su | CHEM 231/232                         |       |      |       |
| <b>Select one:</b>                            |                                |     |           |                                      |       |      |       |
| MATH 141                                      | Calculus II                    | 4   | Sp, F, Su | MATH 140 or equivalent               | —     | —    | —     |
| MATH 131                                      | Calculus II for Life Sciences  | 4   | Sp, F, Su | MATH 130 or 140                      | —     | —    | —     |
| MATH 221                                      | Elementary Calculus II         | 3   | Sp, F, Su | MATH 220, 130, or 140, or equivalent |       |      |       |

**Restricted Electives – 15 credits, including at least one laboratory (L) course:**

| Course       | Description                         | Cr      | Offered  | Prerequisites  | Grade | When | Notes |
|--------------|-------------------------------------|---------|----------|--|-------|------|-------|
| BSCI 334/335 | Mammalogy                           | 3/1 (L) | Sp       | BSCI 106   |       |      |       |
| BSCI 337     | Biology of Insects                  | 4 (L)   | F        | BSCI 106   |       |      |       |
| BSCI 338Q    | Spec. Top. Conservation Lab         | 1 (L)   | Sp       | To be taken concurrently w/BSCI 363.                             |       |      |       |
| BSCI 360     | Principles of Animal Behavior       | 3       | F, Su    | BSCI 105, 106, and 222   |       |      |       |
| BSCI 392     | Biology of Extinct Animals          | 3       | F        | BSCI 106 and BSCI 207  |       |      |       |
| BSCI 393     | Biology of Extinct Animals Lab.     | 1 (L)   | F        | Pre- or co-requisite: BSCI 392                                   |       |      |       |
| BSCI 460     | Plant Ecology                       | 3       | F        | BSCI 106   |       |      |       |
| BSCI 461     | Plant Ecology Laboratory            | 2 (L)   | F        | Pre- or corequisite: BSCI 460                                    |       |      |       |
| BSCI 462     | Population Ecology                  | 3       | S        | BSCI 106 and MATH 220  |       |      |       |
| BSCI 465     | Behavioral Ecology                  | 3       | Varies   |  |       |      |       |
| BSCI 467     | Freshwater Biology                  | 4       | F        | Prereq.: BSCI 207 or dept. perm.                                 |       |      |       |
| BSCI 473     | Marine Ecology                      | 3       | Sp       | BSCI 207.  |       |      |       |
| BSCI 480     | Arthropod Form and Function         | 4 (L)   | Sp       | Permission from BSCI office.                                     |       |      |       |
| BSCI 481     | Insect Diversity and Classification | 4 (L)   | F        | BSCI 207 or dept. perm.  |       |      |       |
| ENSP386      | Internship                          | 3       | Sp,Su,Fa | ENSP386 Internship proposal (approved in advance)                |       |      |       |
| ENST 314     | Fisheries Mgmt and Sustainability   | 3       | Sp*      | <i>*Offered in Spring of "even" years (2014, 2016...)</i>        |       |      |       |
| ENST 373     | Natural Hist of the Chesapeake Bay  | 3       | Fa       | a course in biology or dept. perm.                               |       |      |       |
| ENST 450     | Wetland Ecology                     | 3 (L)   | F        | BIOM 301. <i>Offered "even" years, e.g., Fall 2014</i>           |       |      |       |
| ENST 460     | Principles of Wildlife Management   | 3       | Fa       | 2 semesters of lab. Biology                                      |       |      |       |
| ENST 461     | Urban Wildlife Management           | 3       | F        | -  |       |      |       |
| ENST 479     | Tropical Ecol and Resource Mgmt     | 3       | Sp       | BSCI 106 and ENST perm. <i>Course has required travel-study.</i> |       |      |       |
| GEOG 372     | Remote Sensing                      | 3       | F,S,W,Su |  |       |      |       |
| GEOG 373     | Geographic Info Systems             | 3       | F,S,W,Su |  |       |      |       |
| GEOG 418     | Field & Lab Techniques in EnvSci    | 3       | F        | <i>The field component takes place in the summer.</i>            |       |      |       |
| GEOG 442     | Biogeography                        | 3       | F        | BSCI 361 or GEOG 342 or equivalent                               |       |      |       |
| GEOL 453     | Ecosystem Restoration               | 3       | F        | MATH220, CHEM131/132, and (GEOL100 or ENST200).                  |       |      |       |
| PLSC 471     | Forest Ecology                      | 3       | Sp       | BSCI 106 or PLSC 201   |       |      |       |
| PLSC 481     | Vegetation Assessment               | 2 (L)   | Sp       | GEOG306 recommended.   |       |      |       |
| PLSC 489O    | Plant Taxonomy                      | 3 (L)   | Sp       |  |       |      |       |

Study Abroad and graduate-level courses may be acceptable; please see advisor *in advance* to gain approval.