# MONTANA STATE UNIVERSITY - DEPARTMENT OF LAND RESOURCES \& ENVIRONMENTAL SCIENCES Degree Requirements for a B. S. in Environmental Sciences - Land Rehabilitation Option 2017-2018 Catalog 

## A minimum of 120 credits is required for graduation; at least 42 of these credits must be in courses numbered 300 and above. ALL DEPARTMENTAL REQUIREMENTS \& THEIR PREREQUISITES MUST BE A GRADE OF C- OR BETTER

 graduation worksheets are due one year before graduationDEPARMENTAL REQUIREMENTS

| Subject/\# | Course Title | Credits | Semester | Year | EXCEPTIONS |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Freshman Year |  |  |  |  |  |
| ENSC 110 | Land Resources \& Environmental Sci | 3 | F |  |  |
| BIOB 170IN | Principles of Biological Diversity | 4 | F S (F) |  |  |
| CHMY 141 | College Chemistry I | 4 | F S Su (F) |  |  |
| BIOB 160 | Principles of Living Systems | 4 | F S (S) |  |  |
| CHMY 143 | College Chemistry II | 4 | F S Su (S) |  |  |
| M 161Q (or higher) | Survey of Calculus | 4 | F S Su (S) |  |  |
| WRIT 101W | College Writing I | 3 | F S Su |  |  |
| WRIT 101W is waived with an ACT English Score of 28 or higher, an SAT Critical Writing score of 650 or higher, an MUS Writing Assessment of 5.5, or an ACT/SAT essay/writing subscore of 11. |  |  |  |  |  |
| US Core | University Seminar | 3 | F S Su |  |  |
| Sophomore Year |  | Credits | Semester | Year | EXCEPTIONS |
| ENSC 245IN | Soils | 3 | F |  |  |
| PHSX 205 | College Physics I | 4 | F S Su (F) |  |  |
| GPHY 262 or | Spatial Sci Tech \& Application | 3 | S |  |  |
| GPHY 284 | Intro to GIS Science \& Cartography | 3 | FS (F) |  |  |
| BIOO 230 | Identification of Seed Plants | 4 | S |  |  |
| ENSC 210 | Role of Plants in the Environment | 3 | S |  |  |
| ENSC 260 | Evolution for Environ Scientists | 3 | S |  |  |
| STAT 216Q (or higher) or | Intro to Statistics | 3 | F S Su (S) |  |  |
| BIOM 318 | Biometry | 3 | F |  |  |
| WRIT 201 | College Writing II | 3 | S |  |  |
| Univ Core and Electives |  | 5 |  |  |  |
| Junior Year |  | Credits | Semester | Year | EXCEPTIONS |
| ENSC 353 | Environmental Biogeochemistry | 3 | F |  |  |
| ENSC 443 | Weed Ecology \& Management | 3 | F |  |  |
| ENSC 454 | Landscape Pedology | 3 | F |  |  |
| BIOE 370 or | General Ecology | 3 | F S |  |  |
| NRSM 240 | Natural Resource Ecology | 3 | F |  |  |
| BIOM 452 | Soil \& Environmental Microbiology | 3 | S |  |  |
| Univ Core and Electives |  | 15 |  |  |  |
| Senior Year |  | Credits | Semester | Year | EXCEPTIONS |
| ENSC 410R | Biodiversity Monitoring Methods | 3 | F |  |  |
| ENSC 444 | Watershed Hydrology | 3 | F |  |  |
| ENSC 448 | Stream Restoration Ecology | 3 | F |  |  |
| ENSC 461 | Restoration Ecology | 3 | F |  |  |
| ENSC 499R | LRES Capstone | 3 | F |  |  |
| ENSC 460 | Soil Remediation | 3 | S |  |  |
| ENSC 464 or | Computational Techniques Envir Sci | 1 | S |  |  |
| ENSC 465 | Environmental Biophysics I | 3 | S |  |  |
| NRSM 430 or | Natural Resource Law | 3 | S |  |  |
| PSCI 362 | Natural Resource Policy | 3 | S |  |  |
| Univ Core and Electives |  |  | 6-8 |  |  |

Each student shall work closely with their advisor to plan an integrated set of elective courses appropriate to their academic and professional goals.
RESTRICTED ELECTIVES - Choose 17 credits from the following:

| Subject/\# | Course Title | Credits | Semester | Year | EXCEPTIONS |
| :--- | :--- | :---: | :---: | :---: | :---: |
| AGSC 454 | Agrostology | 3 | F'od |  |  |
| BIOE 375 | Ecol Responses Climate Change | 3 | S |  |  |
| BIOE 428 | Freshwater Ecology | 3 | F |  |  |
| BIOE 455 | Plant Ecology | 3 | S |  |  |
| BIOO 433 | Plant Physiology | 3 | S |  |  |
| BIOO 435 | Plant Systematics | 3 | F |  |  |
| ENSC 407 | Environmental Risk Assessment | 3 | F'od |  |  |
| ENSC 445 | Watershed Analysis | 3 | S |  |  |
| ENSC 466 | Chemical Ecology | 3 | F |  |  |
| ENSC 468 | Ecosystem Biogeochem Global Change | 3 | S |  |  |
| GPHY 357 | GPS Fund/App in Mapping | 3 | F |  |  |
| GPHY 384 | Adv GIS and Spatial Analysis | 3 | F |  |  |
| GPHY 484R | Applied GIS \& Spatial Analysis | 3 | S |  |  |
| NRSM 421 | Holistic Thought/Mgmt | 4 | S |  |  |
| NRSM 453 | Habitat Inventory and Analysis | 3 | F |  |  |
| WILD 301 | Prin of Fish \& Wildlife Mgmt | 3 | S |  |  |

Because some courses are offered alternate years, the proposed scheduling of courses in junior and senior years
may need to be modified. Work with your advisor for your individual schedule.
LRES Majors: ENSC 490 Undergrad Research, ENSC 492 Independent Study or ENSC 498 Internship is strongly recommended.

| CORE 2.0 REQUIREMENTS - Must be a grade C- or better | Semester | Year |  |
| :--- | :--- | :--- | :--- |
| Seminar (US) |  |  | Course |
| College Writing (W)* |  |  |  |
| Quantitative Reasoning (Q)* |  |  |  |
| Diversity (D) |  |  |  |
| Contemporary Issues in Science (CS)* 2nd IN Course will apply to CS |  |  |  |
| Arts (IA or RA) |  |  |  |
| Humanities (IH or RH) |  |  |  |
| Social Sciences (IS or RS) |  |  |  |
| Natural Science (IN or RN)* |  |  |  |
| Research \& Creative Experience (R, RA, RH, RN or RS)* |  |  |  |
| *Satisfied by departmental requirements |  |  |  |

