

## Environmental Science and Management Requirements for a Minor in Environmental Studies

To obtain a minor in Environmental Studies a student must complete a minimum of 28 credits (at least 12 of which must be taken in residence at PSU). At least 4 credits each in biological science, physical science (physics, chemistry, geology), economics, and Math 241 or 251 are expected before admission to the minor.

|   | <b>Credits</b> |
|---|----------------|
| ESR 222 Applied environmental studies: science and policy ..... | 4              |
| ESR 320,1 Analysis of environmental systems I, II .....         | 8              |
| ESR 322 Environmental risk assessment .....                     | 4              |
| Upper division environmental policy/mgmt course .....           | 4              |
| Upper division environmental science courses .....              | 8              |

### **Environmental Policy/Management Courses (minimum 4 credits)**

|  |   |
|--|---|
| ESR 335 Introduction to Environmental Management ..... | 4 |
| Ec 432 . Environmental Economics .....                 | 4 |
| Geog 345 Resource Management .....                     | 4 |
| Geog 445 Resource Management Topics .....              | 4 |
| Geog 446 Water Resource Management .....               | 4 |
| ESR 428 Urban Ecology .....                            | 4 |
| ESR 429 Environmental Impact Assessment .....          | 4 |
| ESR 433 Natural Resource Economics .....               | 4 |
| ESR 434 Business Environmental Management Econ .....   | 4 |
| ESR 443 Global Environmental Economics .....           | 4 |
| ESR 470 Citizen Environmental Science .....            | 4 |
| ESR 478 Aquatic Vascular Plants .....                  | 4 |
| ESR 483 Marine Conservation Science & Management ..... | 4 |
| ESR 488 Environmental Sustainability .....             | 4 |

### **Environmental Science Courses (minimum 8 credits)**

|   |   |
|---|---|
| ESR 410 Aquatic Chemistry .....               | 4 |
| ESR 410 Water and Waste Water Treatment ..... | 4 |
| ESR 410 Road Ecology .....                    | 4 |
| ESR 410 Macroinvertebrates .....              | 4 |
| ESR 420 Ecological Toxicology .....           | 4 |
| ESR 424 Wetland Ecology .....                 | 4 |
| ESR 425 Watershed Hydrology .....             | 4 |
| ESR 426 Ecology of Streams and Rivers .....   | 4 |
| ESR 427 Watershed Biogeochemistry .....       | 4 |
| ESR 445 Old Growth Forest Ecology .....       | 4 |
| ESR 460 Air Quality .....                     | 4 |
| ESR 471 Atmospheric Physics .....             | 4 |
| ESR 473 Phytoplankton Ecology .....           | 4 |
| ESR 479 Fate and Transport of Toxics .....    | 4 |

Courses taken under the undifferentiated grading option (pass, no pass) will not be accepted toward fulfilling minor requirements. Courses with omnibus numbers 401, 404, 405, and 407 are not allowed for minor. Additional courses may be required as prerequisites.