# Faculty presenter: Pat Boleyn Date: 09/26/18

Course Number: ENSC 265 Course title: **Environmental Science Field Methods**

# Criteria: Sustainability focused courses shall:

* Be a minimum of 3 credits – the course is 4 credits
* Be regularly numbered offerings (not 199 or 299 temporary or 298 independent study)
* Have Curriculum Committee approval
* Achieve the same outcomes if course sections are taught by more than one instructor

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| In addition, classes categorized as Sustainability courses shall: | How course meets criteria |
| 1. Sustainability must be the central focus of the course (See criteria a, b and c below) |  |
| Provide opportunities for students to learn about practices that support and improve the health of the systems that sustain life. | The class examines systems within wetlands and in areas of invasive, threatened, and endangered species that support life. It explores the ecosystem functions of wetlands including how wetlands help filter and improve water quality. It also studies the delicate ecosystems that support threatened and endangered species and investigates how humans can support such systems so as to reduce the treat to these species, including reducing invasive species that may be encroaching on these ecosystems. Two outcomes that support this topic is:  Describe and classify wetlands, invasive and threatened and endangered (T & E) species by ecological criteria and observed conditions including hydro geomorphology, using scientific protocols.  Summarize best management practices commonly used to conserve T & E species and designate critical habitat, to assess invasive species and desirable wetland habitat |
| Provide an interdisciplinary perspective that builds understanding of sustainable ecological, social and economic systems and, concern for environmental justice, and the competence to act on such knowledge | The course explores the impact of wetlands and historical wetland destruction on local economies and indigenous people and studies the interactions between wetland pollution and invasive species encroachment in relation to development pressure, economic status, and environmental justice. |
| Ecological | Students make observation and study of ecosystem changes locally, regionally and globally and examine how to reduce and compensate for these changes. They study ecosystem damage and restoration efforts underway. |

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| Social | The course examines the unequitable impacts of wetland pollution, water shortages and aquatic food supply problems on different groups of people, especially those who are underprivileged. Damage to these systems is primarily perpetrated by the privileged but impacts the disadvantaged disproportionately. These impacts are wide ranging including ecosystem impacts, wetlands pollution and wetlands’ ability to remediate pollution, public health effects and economic adversity. |
| Economic | Students practice wetland restoration and study economic impact of wetland damage versus reducing that damage. They study the economic hardships imposed by failing wetland ecosystems, and by invasive species. Students visit a wetland mitigation bank for the City of Eugene and study the purpose and functions of wetland mitigation banking. |
| Equip and encourage students to participate actively in building socially diverse, just, and sustainable society, while cultivating connections to local, regional, and global communities. | Student study proper protocols for wetland restoration and invasive removal along with methods to protect threatened and endangered species. These methods can be applied locally, in other regions and across the globe. |
| Emphasize activities that incorporate critical thinking | Some of the student outcomes related to critical thinking include:   * Infer important hydrological processes acting at a particular site, based on site observations including infiltration, evapotranspiration, soil water storage, drainage and seasonal water budget * Infer mechanisms for presence of wetland, invasive and T and E species on site supported by direct observations on that site, and form testable hypotheses |
| Incorporate interactive learning activities (e.g.: in-class writing exercises classroom discussion peer-review of written material web-based discussion groups, service learning). Specify the types of activities to be used in class. | This course is field-based and students will work together and with outside practitioners and experts on protocols for observing, monitoring, and restoring wetlands, threatened and endangered species habitats, and areas invaded by non-native species. This collaboration will include working together, discussions, writing reports, and peer review of projects. |
| Your course syllabi should articulate objectives or outcomes related to the economic, social and ecological aspects of sustainability | Syllabus attached. |

**Please attach your course syllabi**