

**Section 1. Proposed Course Outline** (A general statement of course content that informs class syllabus construction. Once approved, all sections of a given course must include this content, no matter which instructor teaches the course, or the mode of delivery. Divisions must include this new course outline in the Divisional Course Outline binder as required by COPPs.)

Course Number: **WST 221** Full Course Title for print catalog: **Invasive Species Field Methods**

Abbreviated Course Title for Banner:**Invasive Species Field Methods** (30 character limit)

Prerequisites: Department or instructor consent

Co-requisites:

Grade Option: [x]  Graded (with P/NP option)  [ ]  Pass/No Pass only

|  |  |  |  |
| --- | --- | --- | --- |
| **Number/Type Credits** | **Term Minimum Contact** | **Term Maximum Contact** | **11-Week Term Contact** |
|    Lecture |    hours (lecture credits x 10) |    hours (lecture credits x 12) |    hours (lecture credits x 11) |
| 1 Lec/Lab | 20 hours (lec-lab credits x 20) | 24 hours (lec-lab credits x 24) | 22 hours (lec-lab credits x 22) |
|    Lab |    hours (lab credits x 30) |    hours (lab credits x 36) |    hours (lab credits x 33) |
| 1 **Total credits (sum)** | 20 **Total hours (sum)** | 24 **Total hours (sum)** | 22 **Total hours (sum)** |

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| **Course Description (300 character limit):** |
| Practical field experience using standard protocols to collect data on invasive species and their mitigation in a variety of natural systems. Field exercises on evenings and/or weekends combined with self-paced online learning. |
| **Course Outcomes and Proficiencies** | **Assessments Planned** |
| What will the student ***know*** or ***be able to do*** at the end of the course?What ***attitudes*** related to the subject will the student hold? | What evidence will demonstrate that students have achieved course outcomes? (assessment tools may include departmental tests, written products, portfolios, juried performances, quizzes and exams, or alternative assessments such as qualitative studies, capstone projects, external reviewers, etc.) |
| **Upon successful completion of this course, the student will:** | **How each outcome will be assessed:** |
| Use standard program-accepted protocols, which define the depth of knowledge required for successful completion of the outcomes listed below  | Demonstrated proficiency in independent completion of all identified components of the protocols  |
| Classify observed species on a site by standard taxonomies and categories  | Field Activities, Field Journal, Practical Testing, Oral Report, Practical Activity  |
| Infer mechanisms for dispersal and invasion for species on site supported by direct observations on that site  | Field Activities, Field Journal, Practical Testing  |
| Explain the role disturbance plays on an existing site's resistance to invasion supported by direct observations on that site  | Field Activities, Field Journal, Practical Testing, written reports  |
| Implement basic field standards for the WST program, including use of skills, tools, and interpretation of measurements fundamental to watersheds in the performance of an invasive species assessment  | Field Activities and Practical Testing, data compilation and reports  |
| Summarize best management practices commonly used on invasive species which may be appropriate at a given site including vegetation management, physical controls, rapid response teams  | Field Journal, Scenarios, Written reports or quiz, practical testing  |
| Carry out spatial, geometric, and trigonometric calculation required for creation of reports, as required for the invasive species protocol  | Practical exercises, field activities, written reports or quiz, data compilation  |
| Communicate clearly with peers, supervisors and the general public about watersheds and invasive species-related practices | Data compilation, written reports, quiz, and practical activities  |
| Effectively utilize appropriate library and other information resources to research professional issues and support lifelong learning and job advancement | Data compilation, written reports, quiz, and practical activities  |

**Course Content by Major Topics**What topics will be presented? What are the main activities of the course? What are the central themes?

(See sample at <http://www.lanecc.edu/copps>

**Topics:**

In following a program-accepted protocol, content will be covered at the depth necessary for a field technician to complete an industry-provided project or scenario:

Classification of observed species on a field site using standard taxonomies

Mechanisms for dispersal and invasion for species supported by direct onsite observation

Site disturbance and its role in invasion and resistance to invasion

Advanced field methods, building upon earlier coursework in soils, in-stream, and riparian zones

Best practices involving invasive species work including vegetation management, control mechanisms and rapid-response approaches

Development of reporting criteria for invasive species including detailed spatial, geometric, and triogonmetric aspects

Approaches to effective communication and use of information resources

**Section 2. Proposal Information**

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| --- | --- | --- |
| **Course Developer:** | **Type of Proposal** | **Type of Course:**  |
| Paul Ruscher, Pat Boleyn | [x]  New course | [ ]  Lower Division Collegiate (transfer)  |
| Date: 2/23/2014 |  [ ]  Currently 199 or 299  | [x]  Professional/Technical (required or elective)  |
| Catalog year to take effect:  | [ ]  Experimental Course | [ ]  Developmental, numbered below 100 |
| 2013-2014\_\_\_  |  [ ]  199 Special Studies |  |
| 2014-2015\_\_X\_  |  [ ]  299 Trends  |  |
|  | [ ]  Revised course (If increasing credits, use credit change form) |
|  | [ ]  Reactivated course with no change |
|  | [ ]  Reactivated course with changes  |

**Rationale:**

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| How does this proposal further the goals of the program or department?  |
| This is one of four second-year field courses of the Watershed Science Technician program and provides training in industry-standard field methods appropriate for examining invasive species and related risks in watersheds. Students must complete 4 credits total of these specialized field-methods courses and may elect to complete more.  |
| What assessment evidence supports this proposal?  |
| This course is part of the new WST curriculum, developed by our science faculty with input from our external Watershed Science Advisory Committee. The course teaches learning outcomes identified by industry experts.  |
| How do you know there is a demand for this course?  |
| This is an important field option in the WST program. The course will serve CT students in the program and may also serve others seeking field skills in this area. The presence of or threats of invasion often provide opportunities for new projects that will need WST-trained individuals.  |

**Section 3. Curriculum Equity** [**http://www.lanecc.edu/copps**](http://www.lanecc.edu/copps)

**To promote an environment where all learners are encouraged to develop their full potential, this course will support Lane’s Curriculum Equity policy in the following way(s):**

Using gendered examples equally when illustrating theories and concepts. Use research sources, graphics, videos, and other media that portray women and men from diverse cultural and ethnic backgrounds in roles related to the science and field studies. Use gender-neutral terms such as people, human, you, they, wherever possible and alternate genders where this is not possible.

**Section 4. For revised courses only: PREVIOUS Catalog/Course Information:**

Course Number: Course Title in Banner: (30 characters maximum)

Full Course Title in print catalog:

Prerequisites:

Co-requisites:

Grade Option: [ ]  Graded (with P/NP option) [ ]  Pass/No Pass only

|  |  |  |  |
| --- | --- | --- | --- |
| **Number/Type Credits** | **Term Minimum Contact** | **Term Maximum Contact** | **11-Week Term Contact** |
|    Lecture |    hours (lecture credits x 10) |    hours (lecture credits x 12) |    hours (lecture credits x 11) |
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|    Lab |    hours (lab credits x 30) |    hours (lab credits x 36) |    hours (lab credits x 33) |
|    **Total credits (sum)** |     **Total hours (sum)** |     **Total hours (sum)** |     **Total hours (sum)** |

**Course Description:**

What will change? [ ] Course Number [ ] Title [ ] Course Description [ ] Credit hours [ ] Contact hours

**Section 5. Support Courses (New Professional/Technical course proposals must complete.)**

Professional/Technical courses are tracked within programs for purposes of Carl Perkins funding and budgetary planning. Indicate all degree or certificate programs for which this course will be required.

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| --- | --- |
| Program | Division |
| Watershed Science Technician | Science |
|       |       |

**Section 6. Overlap Courses (New course proposals must complete.)**

While overlap of course materials is not necessarily a flaw, duplication of course materials may lead to inefficient use of college resources. If there is overlap, the faculty of overlapping courses must agree on the extent of overlap and attach a rationale explaining its necessity.

Indicate all departments/courses that this course may overlap. Division Dean of existing course enters one of two options at right. Note: N/A is not an option.

Options:

1. No overlap.

2. Approved: overlap is acceptable. Rationale attached.

3. Disapproved: reasons attached.

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| --- | --- | --- | --- | --- | --- |
| Division | Course Number / Title | % Overlap | Option | Division Dean of existing course(Signature required for all options) | Date |
| Science | GS 102 - Intro Watershed Field Methods | 10 | 2 |  |       |
| Science | BI 103F - Gen Bio Wildflowers | 5 | 2 |  |       |

**Section 7. Qualification to fulfill degree requirements** (complete all relevant forms, available at <http://www.lanecc.edu/currsched/curriculum-forms> and send to Curriculum/Scheduling for the Degree Requirements Review Committee):

[ ]  Form(s) applying for the following degree requirement status have been attached. (Only check this box when forms have been completed and attached.)

**AAOT, ASOT-Bus, OTM:**

[ ]  Arts & Letters

[ ]  Social Sciences

[ ]  Science /Computer Science

[ ]  Mathematics

[ ]  Cultural Literacy Option

(please submit with course syllabus to Michael Samano in Social Science)

**All degrees:**

[ ]  Health/Wellness/Fitness

**AAS, 1-year and 2-year certificates:**

[ ]  Human Relations

**Optional designation:**

[ ]  Sustainability status

**Section 8. Library Impact Statement**

Under accreditation standards, Library consultation is essential for new programs, new courses and for substantively revised courses when the revisions entail any change in library use.

**What assignments will require the use of library and information resources?**

None

Each academic area has a Liaison Librarian <http://www.lanecc.edu/library/services/liaison.htm>. Contact the designated librarian to discuss the library needs of your course. Please allow the librarian at least one week to assess library resources.

**To be completed by Liaison Librarian:**

[x]  Library resources are adequate to support this proposal.

[ ]  Additional resources are needed but can be obtained from current funds.

[ ]  Significant additional Library funds/resources are required to support this proposal.

 Liaison Librarian Date

**Section 9. Divisional Approval** (To be completed by Division Chair and Administrative Assistant)

**Human, Physical, and Financial Resources:**

X Additional instructional costs (staff, materials, services or facilities) will be incurred to offer this course. Source of funding: Science budget, Perkins

[ ]  No additional instructional resources (staff, materials, services or facilities) are needed to offer this course.
Explain:

**Required Certifications:**

[x]  We have developed minimum course certification standards according to the COPPs procedure “Instructor Qualifications: Credit,” to be filed with ASA upon course approval.

[ ]  We have completed faculty certification form(s) for faculty qualified to teach this course, to be filed with ASA and Human Resources upon course approval.

Administrative Assistant/Coordinator Date

**Fees:**

[x]  We have completed fee rationale and fee request forms to be submitted to ASA upon course approval, in compliance with the COPPs procedure, “Fees: Special”

[ ]  No special fees will be required for this course.

**Divisional Recommendation:**

[x]  The Division Chair and Administrative Assistant have reviewed this course proposal and kept a copy for divisional files.

[x]  Faculty review of this course was completed within the division on 2/24/14 (date). Advisory Committee Review

X Pass [ ]  Do Not Pass

Academic Dean Date

**Section 10. College Approval**

Curriculum Committee Chair Date Executive Dean for Academic Affairs Date

Curriculum Approval Committee hearing:       \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date Vice President for Academic & Date

 Student Affairs

**Rationales for Course Material Overlap**

**WST 221: Invasive Species Field Methods**

GS 102 – General Science: Introduction to Watershed Field Methods (10%)

* Program field methods are introduced in GS 102 and all subsequent field methods courses extend and apply these techniques to specialty focus areas or habitats.

BI 103F – General Biology: Wildflowers of Oregon (5%)

* Many important invasive species are identified by their flowers and so this course extends and applies principles developed in BI 103F.

WST 222 – Threatened and Endangered Species Field Methods (10%)

* This course uses the same principles as WST 221, only it applies them in a different context, namely, those that are more desirable to protect and develop.