

**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 234** Full Course Title for print catalog: **Watershed Best Practices**

Abbreviated Course Title for Banner:**Watershed Best Practices** (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** |
| 3Lecture | 30 hours (lecture credits x 10) | 36 hours (lecture credits x 12) | 33 hours (lecture credits x 11) |
|    Lec/Lab |    hours (lec-lab credits x 20) |    hours (lec-lab credits x 24) |    hours (lec-lab credits x 22) |
| 1 Lab | 30 hours (lab credits x 30) | 36 hours (lab credits x 36) | 33 hours (lab credits x 33) |
| 4 **Total credits (sum)** | 60 **Total hours (sum)** | 72 **Total hours (sum)** | 66 **Total hours (sum)** |

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| --- |
| **Course Description (300 character limit):** |
| Capstone experience applying sustainable approaches to watershed restoration and management to improve and maintain water integrity. Students combine field skills and conceptual knowledge with emphasis on integrated methods and best practices. |
| **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:** |
| Generate a comprehensive proposal for field monitoring on a specific site linked to the proposed implementation of a suite of best management practices.  | Written Report, Oral Presentation, Independent Activities  |
| Apply previously obtained knowledge to the development of a comprehensive proposal  | Field Project, Field and Independent Activities, Field Journal, Notes, Written Reports, Oral Presentation, Quiz  |
| - | Field Project, Field Journal, Data Compilation,  |
| Explain the rationale for a field- monitoring program using appropriate terminology and processes  | Written Reports, Oral Presentation, Independent activities, Field Journal, Notes, Quiz  |
| Differentiate areas of a monitoring program that can be implemented, from those that will require further detailed development based on refinement of statistical or regional goals  | Written Reports, Oral Presentation, Independent activities, Data compilation  |
| Critique the efficacy of proposed management practices at a site referencing standard or published scientifically based management documentation.  | Written Reports, Oral Presentation, Independent activities, Field Journal, Notes, Quiz  |
| Produce a written summary report incorporating narrative, maps, and tables  | Written Reports, Oral Presentation, Portfolio  |

**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:**

Application of previously developed field assessment and monitoring skills on a project to maintain or enhance watershed health.

The U.S. Environmental Protection Agency healthy watershed conceptual framework and the six assessment components for watershed health: landscape condition, habitat, hydrology, geomorphology, water quality, and biological condition.

In the development of a comprehensive monitoring proposal for a specific site that identifies threats to the watershed, students will integrate previous course work for:

Monitoring-program development

* Types, levels, and intensity
* Appropriate protocols and conceptual models
* When to consult outside experts

Appropriate Best Management Practices

* Integrated assessment
* Stream bank protection, and bank modification
* Stream crossings, flow and migration Management of organisms, and habitat Response to climate change
* Human-stream interactions
* Emergency reduction
* Education and public awareness

Scientific and management communication

* Report structure and format
* Proposals
* Public input
* Completion of Portfolio Project

**Section 2. Proposal Information**

|  |  |  |
| --- | --- | --- |
| **Course Developer:** | **Type of Proposal** | **Type of Course:**  |
| Stephen Clarke, Paul Ruscher | [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\_✓\_\_  |  [ ]  299 Trends  |  |
|  | [ ]  Revised course (If increasing credits, use credit change form) |
|  | [ ]  Reactivated course with no change |
|  | [ ]  Reactivated course with changes  |

**Rationale:**

|  |
| --- |
| How does this proposal further the goals of the program or department?  |
| This is the WST program’s capstone course. It was developed by the LCC faculty and Watershed Science Advisory Council as a means to ensure that students coming out of the program have the necessary scientific background and field experiences to successfully carry out watershed restoration and related work in this career and technical area. |
| What assessment evidence supports this proposal?  |
| Over 20 external members of the community provided input to provide for key ingredients for the development of this course, and substantial curriculum development work was carried out prior to its inception. |
| How do you know there is a demand for this course?  |
| This is an important required course in the WST program. The course will serve CT students in the program and may also serve others seeking field skills in this area.  |

**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) |
|    Lec/Lab |    hours (lec-lab credits x 20) |    hours (lec-lab credits x 24) |    hours (lec-lab credits x 22) |
|    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.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Division | Course Number / Title | % Overlap | Option | Division Dean of existing course(Signature required for all options) | Date |
| Science | ENVS 183-Aquatic Environment | 10 | 2 |  |       |
| Science | WST 230-Watersheds and Hydrology | 15 | 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

**Rationale for Course Overlap**

**WST 234 – Watershed Best Practices**

1. ENVS 183 – Aquatic Environment (10%)

This course is the class where the concept of watersheds are first introduced to the student in the WST curriculum. Scientific practice in watersheds is introduced. WST 234 significantly extends and applies these introductory concepts.

1. WST 230 – Watersheds and Hydrology (15%)

This course provides advanced study of watersheds in the natural environment and a scientific introduction to the science of hydrology. Conceptual frameworks for understanding human impacts on environments are examined as well as cycles of drought and flood that can impact watersheds in important ways. WST 234 significantly extends and applies conceptual understandings of watersheds and hydrology.