

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 226 Full Course Title for print catalog: In-Stream Field Methods

Abbreviated Course Title for Banner: In-Stream Field Methods (30 character limit)

Prerequisites: BI103F,ENVS183(both C- or better) or instructor consent.

Co-requisites: WST 225

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

Number/Type Credits	Term Minimum Contact	Term Maximum Contact	11-Week Term Contact
<u>0</u> Lecture	$\underline{0}$ hours (lecture credits x 10)	$\underline{0}$ hours (lecture credits x 12)	$\underline{0}$ hours (lecture credits x 11)
<u>2</u> Lec/Lab	$\underline{40}$ hours (lec-lab credits x 20)	$\underline{48}$ hours (lec-lab credits x 24)	$\underline{44}$ hours (lec-lab credits x 22)
<u>0</u> Lab	$\underline{0}$ hours (lab credits x 30)	$\underline{0}$ hours (lab credits x 36)	$\underline{0}$ hours (lab credits x 33)
<u>2</u> Total credits (sum)	$\underline{40}$ Total hours (sum)	$\underline{48}$ Total hours (sum)	$\underline{44}$ Total hours (sum)

Course Description (300 character limit):

Fundamental skills to evaluate in-stream areas including channel attributes, aquatic ecology and water quality. Emphasis on where, when and how to sample stream ecosystems. Field data collection on evenings and/or weekends combined with online learning.

Course Outcomes and Proficiencies

Assessments Planned

What will the student know or be able to do at the end of the What evidence will demonstrate that students have achieved course course? outcomes? (assessment tools may include departmental tests, written products, portfolios, juried performances, quizzes and exams, or What attitudes related to the subject will the student hold? alternative assessments such as qualitative studies, capstone projects, external reviewers, etc.) Upon successful completion of this course, the How each outcome will be assessed: student will: Demonstrated proficiency in independent Complete an in-stream survey protocol within defined quality standards completion of all components of the protocol Measure attributes of stream channels and Field Activities, Field Journal, Practical Testing, flows, including inflows, flooding, and other in-Written Report, Written/Online Quiz stream processes. Field Activities, Scenarios, Field Data Recognize and categorize common, invasive stream species, communities, classifications and Compilation, Written Reports aquatic habitats. Infer channel responses to natural and Field Activities, Scenarios, Field Data anthropogenic disturbances, by direct Compilation, Written Reports observations or measurements. Demonstrate the use of appropriate tools and Practical testing, Field Activities, Field Journal, equipment including water measurement tools, written/online report or quiz sieves, thermometers, gauges, and others as

required in the protocol.	
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 in-stream field method protocol	Field Journal, Scenarios, Written/online reports or quiz, practical testing
Summarize best management practices commonly used to create or preserve healthy watersheds which may be appropriate at given site	Field Activities and Practical Testing
Effectively utilize appropriate supplementary resources and research for survey completion and compilation	Data compilation, written reports, online 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 <u>http://www.lanecc.edu/cops/format3.htm</u>.)

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;

Common instream survey goals and contrast with riparian surveys.

River classification systems.

Levels and methods of quality control during stream surveys.

Stream hydraulic, and sedimentation processes commonly measured during instream work.

Identification and measurement of common aquatic species, habitat types, ecological boundaries, and disturbance types.

Water quality and flow attributes measured during instream projects.

Structuring and reporting survey results as a part of larger regional data gathering efforts. Instream best management practices.

Section 2. Proposal Information

Course Developer:	Type of Proposal	Type of Course:
Paul Ruscher,	🛛 New course	Lower Division Collegiate (transfer)
Stephen Clarke		
Date: <u>3/5/2013</u>	Currently 199 or 299	Professional/Technical (required or elective)
Catalog year to take effect:	Experimental Course	Developmental, numbered below 100
2013-14	199 Special Studies	

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 a required second year course of the new Watershed Science Technician program and provides training in industry standard field methods appropriate for watersheds.

What assessment evidence supports this proposal?

This course is part of the new required 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 required by 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/cops/curric.htm)

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 Lec/Lab Lab Total credits (sum)	<pre>_ hours (lecture credits x 10) _ hours (lec-lab credits x 20) _ hours (lab credits x 30) _ Total hours (sum)</pre>	hours (lecture credits x 12) hours (lec-lab credits x 24) hours (lab credits x 36) Total hours (sum)	hours (lecture credits x 11) hours (lec-lab credits x 22) hours (lab credits x 33) Total hours (sum)
Course Descriptio			

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.

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.

Options:

- 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.
- 1. Approved: overlap is acceptable. Rationale attached.
- 2. Disapproved: reasons attached.

Division	Course Number / Title	% Overlap	Option	Division Dean of existing course (Signature required for all options)	Date
Science	BI 103F	5%	1		
Science	ENVS 181	5%	1		
Science	ENVS 183	5-10%	1		
Science	WST 205	5%	1		
Science	GS 102	5%	1		
Science	WST 225	5%	1		

Section 7. Qualification to fulfill degree requirements (complete all relevant forms, available at <u>http://www.lanecc.edu/currsched/drrcforms.htm</u>, and send to Mary Brau 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:

AAOT:

Arts & Letters

- Social Sciences
- Science / Mathematics / Computer Science

AAS, 1-year and 2-year certificates:

Ethnic/Gender/Cultural Diversity

Human Relations

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

funds.

Each academic area has a Liaison Librarian (<u>http://www.lanecc.edu/library/services/liaison.htm</u>). 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:

Library resources are adequate to support this proposal.

Additional resources are needed but can be obtained from current

Significant additional Library funds/resources are required to support Liaison Librarian Date this proposal.

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

□ No additional instructional resources (staff, materials, services or facilities) are needed to offer this course.

Explain:

Required Certifications:

We have developed minimum course certification standards according to the COPPs procedure "Instructor Qualifications: Credit," to be filed with OISS upon course approval.

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

Fees:

We have completed fee rationale and fee request forms to be submitted to OISS upon course approval, in compliance with the COPPs procedure, "Fees: Special"

□ No special fees will be required for this course.

Divisional Recommendation:

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

Faculty review of this course was completed within the division on 03/15 (date).

X Pass	🗌 [l oC	Not	Pass
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Administrative Assistant/Coordinator	Date	Division Dean D	ate
Section 10. College Approval			
Curriculum Committee Chair	Date	Executive Dean	Date
Curriculum Approval			
Date	Vice Presid	dent, Academic Affairs, Chief Academic Officer	Date