![Lane Community College logo]

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: **GIS 253** Full Course Title for print catalog: **Emerging Trends in GeospatialTechnology**
Abbreviated Course Title for Banner: **Emerging Trends in GeospatialTechnology** (30 character limit)
Prerequisites: 16 credits in GIS course work

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
4 Lecture	40 hours (lecture credits x 10)	48 hours (lecture credits x 12)	44 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)
4 **Total credits (sum)**	40 **Total hours (sum)**	48 **Total hours (sum)**	44 **Total hours (sum)**

Course Description (1000 character limit):

This advanced course provides students with instruction and hands-on experience in emerging trends in geospatial technology. The rapid advances in geospatial technology, such as open-source, 3D visualization and on-line-interactive mapping, as well as innovations in the geospatial industry will be presented. Students will learn how to apply geospatial problem solving and visualization skills and techniques using new technologies.

Course Outcomes and Proficiencies

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?

Assessments Planned

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 be able to:	**How each outcome will be assessed:**
Use two or more open source GIS applications to: a) create and extract data b) analyze data c) create a map and other visualization	Discussion, quiz, projects
Create online maps with interactivity with open source and commercial software	Discussion, quiz, projects
Evaluate various software application (commercial and open source) and make recommendation for use and adoption	Technical documentation
Create 3D visualizations	Discussion, quiz, projects

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/cops/format3.htm.)

Topics:Topic 1 – Innovations in geospatial technology.

Topic 2 – Open source geospatial technology.

9/27/2011

Topic 3 – Internet-based tools for geospatial technology.

Topic 4 –Trends in Visualization.

Section 2. Proposal Information

Course Developer:	Type of Proposal	Type of Course:
<u>Lynn Songer</u>	x☐ New course	☐ Lower Division Collegiate (transfer)
Date: <u>October 2011</u>	☐ Currently 199 or 299	x☐ Professional/Technical (required or elective)
Catalog year to take effect:	☐ Experimental Course	☐ Developmental, numbered below 100
<u>2010-11</u>	☐ 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 course will be an advanced elective for students taking the GIST certificate program. The course will focus on advanced skills for evaluating and using a variety of open-source and innovations in geospatial technology

What assessment evidence supports this proposal?
The need to develop advances GIS class that focuses emerging trends and innovations is supported by our industry advisory board

How do you know there is a demand for this course?
GIS classes have been offered for the last three years with growing enrollment. Several students who have finished the pathway certificate program have signed up for independent study classes to continue building their skills. Geospatial technologies are listed by the DOL as one of the high-growth career fields. Additionally, offering this proposed course is supported by our advisory committee.

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):
Use data related to culturally and ethnically diverse people when creating thematic maps. This will promote an understanding of the power of data visualization to create flawed data interpretation. Data will focus on race, gender, age, religion, disability, national origin, marital status, or class background.

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.

Program	Division
Geographic Information Science and Technology (GIST)	Social 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 three options at right. Note: N/A is not an option.

Options:
1. Approved: course does not 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
Social Science	GIS 246	10			

Section 7. Qualification to fulfill degree requirements (complete all relevant forms, available at http://www.lanecc.edu/currsched/drrcforms.htm, 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:

☐ Arts & Letters

☒ Social Sciences

☐ Science / Mathematics / Computer Science

AAOT:

☐ Ethnic/Gender/Cultural Diversity

AAS, 1-year and 2-year certificates:

☐ 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?

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:

☐ 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:

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

☐ 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 ____(date).

☐ Pass   ☐ Do Not Pass

Administrative Assistant/Coordinator	Date	Division Dean	Date

Section 10. College Approval

Curriculum Committee Chair	Date	Executive Dean	Date

Curriculum Approval
Committee hearing: ____
                          Date   Vice President, Academic Affairs, Chief Academic Officer   Date