



2008-2009

**Career and Technical Programs
Computer Information Technology
(541) 463-5826**

**Two-Year Associate of Applied
Science Degree, Computer
Programming**

**Career Pathway Certificate
of Completion, Web Programming**

**Career Pathway Certificate of
Completion, Geographic
Information Systems**

Computer Programming

Note The Computer Programming Two-Year Degree is under curriculum review and will not be available to new students in the 2008-2009 academic year. Current students will be able to complete their degrees. For additional information, contact Deb Hupcey in the Counseling Department, (541) 463-5635, or the CIT department, (541) 463-5826.

Web Programming

Career Pathway Certificate of Completion

Purpose To prepare technicians for entry-level positions as web programmers.

Learning Outcomes The certificate recipient will:

- design, implement, test, debug and document web based computer programs using a variety of current tools and technologies.
- understand the use of web programming to support organizational processes.
- interpret the mathematical concepts of a programming related problem-solving task and translate them into programming logic and expressions.
- use appropriate library and information resources to research programming tools and technologies and support lifelong technical learning.

Employment Trends The Oregon Labor Market Information System projects 105 annual openings statewide for Computer Programmer, and 9 annual openings for Lane County. For the decade ending in 2014, the statewide projected increase is 9% and for Lane County 7.8%. Related job categories such as Software Engineer, Web Developer, Systems Analyst, Database Programmer show projected increases statewide and for Lane County of 20-25%.

Wages Statewide average hourly wage is \$33.47 and \$69,615 annually. Lane County average hourly wage is \$28.36 and \$58,991 annually.

Costs in Addition to Tuition (estimate)*
Books and lab fees\$200-300
Students taking courses using CIT labs are assessed a one-time fee up to \$28 per term. See the CIT department for details.
* Subject to change without notice.

Prerequisites Students are expected to be comfortable working on a computer, including the ability to create files with a text editor, manage file folders, and have a working knowledge of XHTML and CSS.

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Program Advisor Deb Hupcey, Bldg. 2, Rm. 135, (541) 463-5635, hupceyd@lanecc.edu

Program Counselor Marva Solomon, Bldg. 1, Rm. 103B, (541) 463-5625, solomonm@lanecc.edu

Courses required	Credits
CS 133JS Beginning Programming	
Javascript ^{*,D,G,S}	4
CS 195 Web Development 1 ^{*,D,G}	4
CS 295 Web Development 2 ^{*,1,D,G,S}	4

Total Credits 12

Computer Programming

Geographic Information Systems

Career Pathway Certificate of Completion

Learning Outcomes The graduate will understand:

- basic cartographic principles of global reference and coordinate systems, maps and generalization, and types of maps including reference, thematic, topographic, aerial photography.
- skills and techniques used to create, analyze, and display spatial data using geographic information system software.
- principles of information analysis including how information is designed, organized, analyzed, visualized, used and misused; and the use of software tools to communicate information effectively through descriptive statistics and narratives, graphical visualization and mapping applications.
- project management of basic GIS tasks such as data management, cartographic design, and document conversion and analysis.

Courses required	Credits
GIS 245 Maps and Spatial Information ^{D,G} ,	4
GIS 246 Introduction to GIS ^{D,G} ,	4
GIS 248 Applications in GIS ^{D,G} ,	4
CIS 247 Information Analysis and Visualization ^{D,G,S}	4
Total Credits	16

Standard footnotes:

- * Prerequisite required
- A Meets Arts/Letters requirement
- B Must be passed with grade of "B-" or better to use as a prerequisite
- D Degree or certificate requirement; must be passed with grade of "C-" or better
- G Must be taken for a grade, not P/NP; major requirement

- H Meets Human Relations/Social Science requirement
- M Meets Mathematics requirement
- P Meets PE/Health requirement
- R Required for AAS degree
- S Meets Science/Math/Computer Science requirement
- W Meets Written Communications or English Composition requirement