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**Part 1: Course Details**

**Division/Department requesting change: CIT**

**Course developer name and contact information: Joseph Colton – coltonj@lanecc.edu**

**Division Dean: Chris Rehn**

**Academic year (e.g., 2018-19) change will take effect: 2019-20**

**TYPE OF PROPOSAL**

**New course (brand new course or courses that have not been offered in three or more years)**

**Currently a 199 or 299 experimental course?** **Attach** **the 199/299** **course outline or syllabus**

New 199/299 experimental course (May be offered two times over a two-year period. After that, experimental courses to be submitted as a new course.)

**TYPE OF COURSE**

**Lower Division Collegiate**  **Professional/Technical**  **Developmental, numbered below 100**

**COURSE NUMBER AND TITLE**

**To determine a transfer course number, check the** [Catalog of Lower Division Collegiate Courses](https://www.lanecc.edu/sites/default/files/currsched/ldccatalog01.docx) or do a web search for schools with similar courses. For CTE, look at schools with similar courses or contact the [Curriculum Office](https://www.lanecc.edu/currsched/curriculum) for help.

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| **Course Number** | **Short Course Title for Banner (30 character limit)** | **Full Course Title for print catalog** |
| **CS 189** | **Routing and Switching** | **Routing and Switching Essentials** |

**COURSE DESCRIPTION (aim for 300-400 characters/approximately 60-70 words) For help and examples, see** [Sample Course Descriptions](https://www.lanecc.edu/currsched/sample-course-descriptions)**.** If this course is repeatable for credit, please include a sentence in your description. E.g., “This course is repeatable for up to \_\_\_ credits” (cannot exceed 12 credits).

***Routing and Switching Essentials covers the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality.***

**PREREQUISITES, CO-REQUISITES, GRADE OPTIONS, CREDITS**

Prerequisite courses: \_\_CS 179\_\_\_\_\_\_\_\_\_\_\_\_

Placement test code and scores (e.g., 4cpa score of 75-120; if you need a code, contact testing) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Co-requisite courses:

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

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| **Credit Breakdown**  \_2\_\_ Lecture  \_1\_\_ Lecture/Lab  \_1\_\_ Lab  \_4\_\_ Total Credits | **Contact Hours Per Week**  \_2\_\_ Lecture  \_2\_\_ Lecture/Lab  \_3\_\_ Lab  \_7\_\_ Total Contact Hours per week | **Contact Hour Formula**  **1 lecture = 1 contact hour**  **1 lecture/lab = 2 contact hours**  **1 lab = 3 contact hours** |

# **Part 2: Rationale, Equity, Library Resources, Course Overlap**

**RATIONALE AND CONTEXT Describe the context and rationale for the new course. How will this course meet the needs of transfer students or employers? What is the demand for this course? How does this proposal further the goals of the program or department? Provide as many details about this new course as possible.**

***We are adopting the Cisco Academy Curriculum in order to better prepare students for job opportunities and to provide more depth in computer networking. Many companies require students applying for network administrator positions have Cisco certifications. This course helps students develop depth in networking and prepares them for industry certifications.***

**CURRICULUM EQUITY STATEMENT** Please do not copy/paste the [COPPS equity statement](https://www.lanecc.edu/copps/documents/curriculum-equity). Reflect how your course supports equity. **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):**

*This course will be using the Cisco Network Academy materials. It provides extremely valuable materials including texts, videos, and simulation software at no cost to the students. The materials are also available online instead of just in classroom settings so students who are not able to attend class everyday are able to continue to work at home. The cost and availability make the curriculum more accessible and support equity for all of our students.*

**LIBRARY CONSULTATION Please contact your liaison librarian to schedule a 30+ minute individualized instructional consultation and collaboration session. In addition to your specific course-related questions, your librarian will be prepared to share:**

* **Library resources and services that support your teaching and student learning needs**
* **OER (Open Educational Resources) options that align with your program and course curriculum**
* **Strategies for integrating the development of information literacy skills into course content and/or assignments**

Please allow one week for the librarian to prepare for your consultation. If you are not sure who your liaison librarian is, you can either look it up on the [Library’s website](https://library.lanecc.edu/services/liaison) or call the Library Reference Desk at 463-5355. (Librarian signature required above.)

**COURSE OVERLAP Indicate any topic/content overlap with other courses. How will this course's topics and content be differentiated?** If there is overlap, faculty of overlapping courses must **agree on the extent of overlap and** **include a rationale** explaining its necessity. The dean of the division in which overlap occurs must sign approval (see checklist).

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| Division/department | Course Number / Title | Rationale | Dean of overlap course (name) |
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**CAREER/TECHNICAL COURSE TRACKING (required only for career/technical courses)**

Career/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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| **Programs in which course will be required** | **Division** |
| Computer Network Operations AAS | CIT |
|  |  |

# **Part 3: Outcomes, Assessments, Topics**

**List course outcomes, Core Learning Outcomes (CLOs), and Assessments** The information in this section should be used to create your course outline and syllabus. How are Lane’s Core Learning Outcomes emphasized and measured or demonstrated through course assessments? Please indicate which [Core Learning Outcomes and Dimensions](https://www.lanecc.edu/assessment/core-learning-outcomes) are linked to your course outcomes. Need help? Contact Tammy Salman, Faculty Coordinator, Assessment and Curriculum Development or Sarah Lushia, Core Learning Outcomes Coordinator.

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| [**Core Learning Outcomes and Dimension**s](https://www.lanecc.edu/assessment/core-learning-outcomes) **You do not need a CLO for each course outcome**.  **EXAMPLE** CLO 1.2:Determine information need, find and cite relevant information | **COURSE-LEVEL LEARNING OUTCOMES** (course outcomes)  [See this page for guidance on writing outcomes](https://www.lanecc.edu/assessment/developing-and-refining-learning-outcomes)  **EXAMPLE**  Upon successful completion of this course, students will be able to:  1. Describe and explain general plant structure and function in relation to plant growth and development.  2. Demonstrate knowledge of horticultural principles in the cultivation of plants. | **ASSESSMENTS** Include specific assignments you will use to measure/observe student attainment of outcomes. For assessment ideas see [Authentic Tasks](http://jfmueller.faculty.noctrl.edu/toolbox/tasks.htm) |
| **1.5, 3.1, 3.2, 3.3, 3.4, 3.5, 5.1, 5.2, 5.3** | * Determine how a router will forward traffic based on the contents of a routing table. | Chapter Exams, Skills Assessments, Final Exam |
| 4.2, 5.1, 5.2 | * Demonstrate how switching operates in a small to medium-sized business network. | Chapter Exams, Skills Assessments, Final Exam |
| 1.5, 3.3, 3.5, 5.2 | * Use monitoring tools and network management protocols to troubleshoot data networks. | Chapter Exams, Skills Assessments, Final Exam |

**COMPETENCIES AND TOPICS COVERED (course outline)**

Example: [Course Outline Sample](https://www.lanecc.edu/copps/course-outline-sample) (from COPPS)

# *1 Routing Concepts*

# *2 Static Routing*

# *3 Dynamic Routing*

# *4 Switched Networks*

# *5 Switch Configuration*

# *6 VLANs*

# *7 Access Control Lists*

# *8 DHCP*

# *9 NAT for IPv4*

# *10 Device Discovery, Management, and Maintenance*

# **Part 4: Financial and Student Impact**

**Financial Impact Analysis**

Describe the financial impact of the proposed course, including: Instructional costs; workload (both FT and PT faculty and classified staff); physical space requirements (e.g., labs); additional equipment needs; additional fees; any cost reductions

*By switching the networking core courses to align with the Cisco Network Academy curriculum we will be able to save costs on curriculum development, but we will need to have our faculty trained and certified. There are no new lab fees and we will be able to deliver the class in an online setting.*

**Student Impact Analysis**

Describe the proposed course’s potential impact on students, including: Effect of changes on program requirements, articulations, cost, credit load, avoiding excess credits in transfer, financial aid credit limits, completion, and enrollments; determination of how new/revised courses transfer to four-year schools (please consult with your advisor).

*The course changes should allow for better articulation with other schools using Cisco Network Academy including Linn-Benton and other Oregon community colleges. It should be easier to accommodate students who are unable to come to campus regularly because Cisco provides virtualization of Cisco equipment.*

# **Part 5: Degree Requirements Applications (if applicable)**

**If applying for any of the following**, check the appropriate boxes and include your completed degree requirements forms with this course proposal. Go to the [Curriculum Office website](https://www.lanecc.edu/currsched/curriculum-forms) to download the appropriate forms.

AAOT (Career Technical courses not eligible)

Arts & Letters

Cultural Literacy

Information Literacy

Mathematics

Science /Computer Science

Social Sciences

Speech/Oral Communication

Health/Wellness/Fitness (all degrees)

Human Relations designation (for AAS degrees and certificates)

Sustainability course status (optional)

**College Approval (before signing, please see Curriculum Committee recommendations for this course in the committee’s** [**meeting minutes**](https://www.lanecc.edu/currsched/agendas)**)**

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Executive Dean for Academic Affairs Date

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Vice President for Academic & Student Affairs Date