Lane Community College

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: CS279 Full Course Title for print catalog: **Essentials of Nework Administration**

Abbreviated Course Title for Banner: Essentials of Network Admin (30 character limit)

Prerequisites: CS179

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
3 Lecture	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)**

Course Description (300 character limit):
Provides students with an in-depth understanding of key networking concepts and tools enabling them to be successful in the more advanced networking courses and as networking professionals. Example topics: Network design/mapping, TCP/IP protocols, IP addressing, port numbers, and routing protocols.

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? **Upon successful completion of this course, the student will:**	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.) **How each outcome will be assessed:**
Understand the IPv6 protocol and be able to think critically about the differences between this new protocol and the traditional IPv4 protocol	In-class discussion, lab assignments, group work, and exams
Be able to design networks, and map them in order to communicate the design effectively	Same as above
Have an in-depth understanding of the most common networking protocols and be able to apply this knowledge to solving networking problems	Same as above
Be able to use protocol analysis software thereby engaging the different perspective provided by this tool to aid in the understanding of networking concepts, and to find solutions for network problems	Same as above

Understand IP addressing in order to create IP subnets for various networked environments and to arrive at solutions for network segmentation issues	Same as above
Have an in-depth understanding of network port numbers and apply this knowledge for effective network administration	Same as above
Know the fundamentals of router configuration and routing protocols in order to create solutions for network communication problems and for effectively implementing network segmentation	Same as above

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:

-Important TCP/IP protocols: Description and exploration
-Introduction to the IPv6 protocol: Comparison with traditional IPv4
-Utilizing protocol analysis software to understand protocols and network communication
-Network port numbers: An in-depth exploration and practice activities
-IP subnetting: An in-depth exploration and practice activities
-Network design: Analysis and design of network segments for effective operation
-Network mapping: Documenting network designs effectively utilizing mapping software
-Routing: Review of router's purpose and an introduction to router configuration
-Routing protocols: Understanding common routing protocols

Section 2. Proposal Information

Course Developer:
Gary Bricher
Date: 12/11/12;
Catalog year to take effect: 2013-14

Catalog year to take effect:
2011-2012___
2012-2013___

Type of Proposal
☒ New course
☐ Currently 199 or 299
☐ Experimental Course
☐ 199 Special Studies
☐ 299 Trends
☐ Revised course (If increasing credits, use credit change form)
☐ Reactivated course with no change
☐ Reactivated course with changes

Type of Course:
☐ Lower Division Collegiate (transfer)
☒ Professional/Technical (required or elective)
☐ Developmental, numbered below 100

Rationale:

How does this proposal further the goals of the program or department?

In order for students to be successful in the more advanced networking courses and on the job, they need to understand some essential networking topics and tools in more depth than they receive from the

survey course CS 179 Introduction to Computer Networks. This new course will be the follow-on course for CS 179. It will give them the skills they need to perform effectively in the advanced networking courses. A goal of the department is to graduate students with the knowledge and skills they need to perform professionally in the computing field. This course will help further that goal.

What assessment evidence supports this proposal?

The importance of in-depth knowledge of the key networking topics addressed by this course has been found to be critical for student success by faculty teaching the more advance networking courses. Also, the topics of this course are known to be of high importance for networking professionals from their previlence in a variety of text books, trade books, and other publications both electronic and hardcopy in the field.

How do you know there is a demand for this course?

The course will be a required course in the Computer Network Operations AAS degree program to follow-on after CS 179. CS 179's total enrollment from Spring 2012 through Winter 2013 has amounted to 232 students.

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):

Every effort will be made to include content by and about culturally and ethnically diverse people when feasible. Materials which present a significant number of instances of fully integrated human groupings and settings to indicate equal status and non-segregated social relations will be included. When using quotations, references and reading recommendations, an effort will be made to include those authored by individuals who endorse pluralism. When theories and concepts are illustrated, gendered examples will be used equally. The course will be open to all students independent of race, religion, ethnic background, or lifestyle. Special arrangements will be made for students with disabilities. Students will have an opportunity to provide feedback on any stereotyping that they might encounter in the curriculum.

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:

Note: Our department's Windows server course was formerly named CS 279W Windows Server Administration but was re-named awhile back to CS 240W Advanced Windows: Server Management to be more consistent with state naming standards. The new course CS 279 that is the subject of this proposal is not related to that course.

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
Computer Network Operations Degree	BCIT

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
None (at this depth of coverage)					

Section 7. Qualification to fulfill degree requirements (complete all relevant forms, available at http://www.lanecc.edu/currsched/index.html 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 /Computer Science

☐ Mathematics

☐ Cultural Literacy Option

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?
Some assignments will require gathering information beyond the textbook from websites.

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 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.

Fees:
☒ 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:
☒ 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 _____

Academic Dean _____ Date _____

Section 10. College Approval

Curriculum Committee Chair _____ Date _____

Curriculum Approval Committee hearing: _____ Date _____

Executive Dean for Academic Affairs _____ Date _____

Vice President for Academic & Student Affairs _____ Date _____