

**Point Loma Nazarene University
Mathematical, Information and Computer Sciences**

CSC 3112 Network+ Exam Prep

Spring 2024 – Online (2 Credit Hours)

Time and Place: Online and anytime

Instructor: Maria Zack, Ph.D.

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Office Hours:

Some in person (RS246) or Zoom and some on Zoom only (see below) - [Click here for appointment \(Links to an external site.\)](#)

These are the times that I work to hold open for appointments. If none of them work you can email me to see if we can find another time. Please note that some sessions are Zoom only and are shown with the statement "Zoom only" after the time. The others can be Zoom or In-Person.

Monday 10:30-11:30 AM

Tuesday 8:00-9:30 AM and 2:00-3:00 PM

Wednesday By appointment only

Thursday 5:00-6:00 PM (Zoom only)

Friday 11:15 AM - 12:00 PM

PLNU Mission

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Department Mission

The Mathematical, Information, and Computer Sciences department at Point Loma Nazarene University is committed to maintaining a curriculum that provides its students with the tools to be productive, the passion to continue learning, and Christian perspectives to provide a basis for making sound value judgments.

COURSE DESCRIPTION

CSC 3112 Network+ Exam Preparation (1-2 Units)

This is an independent study course designed for students who wish to prepare for the CompTIA's Network+ certification exam. The course is intended for students who have already completed at least one course in computer networking.

Prerequisite(s): Consent of instructor.

Text: Text is included as an electronic copy in course. **You need to purchase access to the textbook. Please look at the modules for the information about how to purchase access from UCertify.**

Needed Supplies:

Students will need access to a computer and a high speed internet connection

Detailed Course Information:

CSC3112 is an independent study, self-paced, competency based course designed for students who wish to prepare for the CompTIA's Network+ certification exam. The course is intended for students who have already completed a Networking course covering the foundational elements of computer networking concepts. Students will be required to first work through each of the study guides lessons and then complete pre-assessment exams to determine which (if any) knowledge domains require review. Students will then review any required knowledge domains to prepare for the practice exams. Students will then take a series of practice tests, review deficient content areas and retake until all practice test have been passed with an 80 or better. **A minimum score of 80 on all chapter quizzes and practice exams are required to pass the course if a passing score on the certification exam is not achieved.** A faculty advisor provides support and accountability in completing the requirements of the course. Although the course is self-paced, a minimum amount of progress must be made each week and all course requirements must be completed within the assigned course time. Attempting the certification exam within the assigned course time is also required. Although passing the certification exam is not required to pass this course, the results of the certification exam will be used to determine the final grade in the course. Students already holding a current certification for this course are not eligible to take this course.

Philosophy and Approach:

Self-paced competency based courses are designed to allow students to move through course material as quickly as they like while demonstrating a minimum level of

competency on a given topic before they are permitted to move forward in the course. The course is divided into practice exams and other learning activities to help prepare students in the knowledge areas on the certification exams.

Although this is a self-paced course, students must complete at least one (1) review of knowledge area or practice exam per week. Students must also complete all certification practice exams by the end of Week 13 and attempt the Network+ certification exam by the end of Week 14. Once students attempt the Network+ certification exams, no additional work in the course is required. However, if the student did not pass the certification exam on their first attempt, they can continue to study and retake the exam to improve their grade in the course until the end of Week 15. Points will be deducted from the student's overall grade if minimum progress is not made each week or given activity deadlines are not met. However, students are encouraged to move as quickly as they are able and complete all course requirements prior to the 15-week time limit.

Objectives:

The course is designed to help you:

- Acquire and reinforce knowledge and develop understanding of the knowledge domains associated with the CompTIA Network+ certification exams.
- Prepare for and take the CompTIA Network+ certification exams.

Course Learning Outcomes

1. Students will be able to explain basic networking concepts and the OSI networking model and how it relates to the TCP/IP networking stack.
2. Students will be able to determine network names, broadcast addresses, subnet masks and host address ranges given a network address and subnet value.
3. Students will be able to determine the routing path and method of information as it passes through an IP network.
4. Students will be able to program router and switch information to create an IP based LAN/WAN.
5. Students will be able explain network security risk and be able to analyze and determine appropriate network risk mitigation techniques.
6. Students will be able to utilize network troubleshooting techniques to solve common communication problems.

Grading:

Students must earn 70% or more in the course to earn a passing grade of "C-".

Your grade for the course is based on the points earned by the following criteria at the end of the course:

- Exam score of 720 or more and the exam – 1000 points (100% or "A")
- Exam score between 620 and 719 and practice exams complete with 80+ - 860 points (86% or "B")
- Exam score between 520 and 619 and practice exams complete with 80+ - 760 points (76% or "C")
- Exam score between 420 and 519 and practice exams complete with 80+ - 660 points (66% or "D")
- Exam score below 420 or all quizzes and exams not complete with 80+ - zero points (0% or "F")

Students must earn 520 points or more on the certification exam and have no more than 60 points deducted from their final course score to earn 70% and thus get a "C-."

The grading scale for the course is based on a percentage of points available:

A	92.50 - 100%	C	72.50 - 77.49%
A-	90.00 - 92.49%	C-	70.00 - 72.49%
B+	87.50 - 89.99%	D+	67.50 - 69.99%
B	82.50 - 87.49%	D	62.50 - 66.49%
B-	80.00 - 82.49%	D-	60.00 - 62.49%
C+	77.50 - 79.99%	F	0 - 59.99%

Late Work Policy

There is a point deduction penalty for any assignment not completed by their respective due dates. Practice exams and the post assessment exam must be passed with a score of 80% or more prior to their due dates.

Note: 10 points will be deducted for a student's overall point total for each chapter quiz completed late and 25 points will be deducted from a student's overall point total for

each due date that is missed for assessment exams or practice exams. 10 point per day will be deducted from a student's overall point total for late exam appointment confirmation and late exam results submitted.

Credit Hour:

In the interest of providing sufficient time to accomplish the stated course learning outcomes, this class meets the PLNU credit hour policy for a 2-units class delivered over 15 weeks. It is anticipated that you will spend a minimum of 37.5 participation hours per credit hour in your course. The estimated time expectations for this course are shown below:

Table of Course Hour Allocation

Activity	Hours
Chapter Review	36
Knowledge Domain Review	20
Practice Exams	12
Certification Exams	6
TOTAL	74

Tests and Learning Activities:

All chapter tests, practice exams and learning activities can be redone as often as needed to achieve the desired score.

Helpful Tool for Studying:

This class guides you through the CompTIA exam preparation material and that should be your focus. The [Professor Messer videos](#) provide a nice

supplement and can be helpful as you are in your last few weeks of the course and getting ready for the exam.

Final Exam: Date and Time:

The final in the course is the CompTIA Network+ certification exam and can be taken any time before its due date. All students are required to attempt the certification exam at least once before the end of week 15. Students may retake the certification exam if they do not pass on their first attempt, as long as the attempt is completed by the end of finals week.

INCOMPLETES AND LATE ASSIGNMENTS

Incompletes will only be assigned in extremely unusual circumstances.

CLASS ENROLLMENT

It is the student's responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

SPIRITUAL CARE

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith.

If you have questions, a desire to meet with the chaplain or have prayer requests you can contact your professor or the [Office of Spiritual Life and Formation](#).

STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer

distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on [State Authorization](#) to view which states allow online (distance education) outside of California.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See [Academic PoliciesLinks to an external site.](#) for definitions of kinds of academic dishonesty and for further policy information.

ARTIFICIAL INTELLIGENCE (AI) POLICY

Use of Artificial Intelligence (AI) tools (e.g, ChatGPT, iA Writer, Marmot, Botowski) in creating written work for this class is not permitted, and use of these tools will be treated as plagiarism.

PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular

course and/or if they do not wish to utilize some or all of the elements of their AP in that course.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

LANGUAGE AND BELONGING

Point Loma Nazarene University faculty are committed to helping create a safe and hospitable learning environment for all students. As Christian scholars we are keenly aware of the power of language and believe in treating others with dignity. As such, it is important that our language be equitable, inclusive, and prejudice free. Inclusive/Bias-free language is the standard outlined by all major academic style guides, including MLA, APA, and Chicago, and it is the expected norm in university-level work. Good writing and speaking do not use unsubstantiated or irrelevant generalizations about personal qualities such as age, disability, economic class, ethnicity, marital status, parentage, political or religious beliefs, race, gender, sex, or sexual orientation. Inclusive language also avoids using stereotypes or terminology that demeans persons or groups based on age, disability, class, ethnicity, gender, race, language, or national origin. Respectful use of language is particularly important when referring to those outside of the religious and lifestyle commitments of those in the PLNU community. By working toward precision and clarity of language, we mark ourselves as serious and respectful scholars, and we model the Christ-like quality of hospitality.

You may report an incident(s) using the [Bias Incident Reporting Form](#)[Links to an external site.](#)

SEXUAL MISCONDUCT AND DISCRIMINATION

In support of a safe learning environment, if you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that accommodations and resources are available through the Title IX Office at pointloma.edu/Title-IX. Please be aware that under Title IX of the Education Amendments of 1972, faculty and staff are required to disclose information about such misconduct to the Title IX Office.

If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at counselingservices@pointloma.edu or find a list of campus pastors at pointloma.edu/title-ix.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions, the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation.

In some courses, a portion of the credit hour content will be delivered **asynchronously** and attendance will be determined by submitting the assignments by the posted due dates. See [Academic Policies](#) in the Undergraduate Academic Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted.

Asynchronous Attendance/Participation Definition

A day of attendance in asynchronous content is determined as contributing a substantive note, assignment, discussion, or submission by the posted due date. Failure to meet these standards will result in an absence for that day. Instructors will determine how many asynchronous attendance days are required each week.

USE OF TECHNOLOGY

In order to be successful in the online or hybrid environment, you'll need to meet the minimum technology and system requirements; please refer to the [Technology and System Requirements](#) information. Additionally, students are required to have headphone speakers, microphone, or webcams compatible with their computer available to use. Please note that any course with online proctored exams require a computer with a camera (tablets are not compatible) to complete exams online.

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.

LOMA WRITING CENTER

The Loma Writing Center exists to help all members of the PLNU community cultivate transferable writing skills to engage their academic, professional, personal, and spiritual communities. We work toward this goal by conducting one-on-one consultation sessions, supporting writing education across the PLNU community, and participating in ongoing writing center research.

Getting feedback from the Loma Writing Center while you're in the process of working on an assignment is a great way to improve the quality of your writing and develop as a writer. You are encouraged to talk with a trained writing consultant about getting started

on an assignment, organizing your ideas, finding and citing sources, revising, editing for grammar and polishing final drafts, and more. For information about how to make in-person or online appointments, see [Loma Writing Center webpage](#) or visit the Loma Writer Center on the first floor of the Ryan Library, room 221.

Some Tips About This Class:

Set aside at least one to two hours each week to complete learning sessions.

Quizzes and assignments can be redone as many times as you like. Maximize your points by redoing assignments that do not receive full credit.

If you have a question, **ASK**.

The list of assignment deadlines is listed below.

Course Summary:

Date	Details	Due
Wed Jan 10, 2024	Page Purchase uCertify Access Code	to do: 11:59pm
	Page Register with CompTIA	to do: 11:59pm
Sun Jan 14, 2024	Assignment Lesson 1: Introduction to Networks	due by 11:59pm
	Assignment Lesson 2: The Open Systems Interconnection Specifications	due by 11:59pm
	Assignment Lesson 3: Networking Connectors and Wiring Standards	due by 11:59pm
Sun Jan 21, 2024	Assignment Lesson 4: The Current Ethernet Specifications	due by 11:59pm

Date	Details	Due
	Assignment Lesson 5: Networking Devices	due by 11:59pm
	Assignment Lesson 6: Introduction to the Internet Protocol	due by 11:59pm
Sun Jan 28, 2024	Assignment Lesson 7: IP Addressing	due by 11:59pm
	Assignment Lesson 8: IP Subnetting, Troubleshooting IP, and Introduction to NAT	due by 11:59pm
	Assignment Lesson 10: Routing Protocols	due by 11:59pm
Sun Feb 4, 2024	Assignment Lesson 11: Switching and Virtual LANs	due by 11:59pm
	Assignment Lesson 9: Introduction to IP Routing	due by 11:59pm
	Assignment Lesson 12: Wireless Networking	due by 11:59pm
Sun Feb 11, 2024	Assignment Lesson 13: Using Statistics and Sensors to Ensure Network Availability	due by 11:59pm
	Assignment Lesson 14: Organizational Documents and Policies	due by 11:59pm
	Assignment Lesson 15: High Availability and Disaster Recovery	due by 11:59pm
Sun Feb 18, 2024	Assignment Lesson 16: Common Security Concepts	due by 11:59pm

Date	Details	Due
	Assignment Lesson 17: Common Types of Attacks	due by 11:59pm
	Assignment Lesson 18: Network Hardening Techniques	due by 11:59pm
	Assignment Lesson 19: Remote Access Security	due by 11:59pm
	Assignment Lesson 20: Physical Security	due by 11:59pm
	Assignment Lesson 21: Data Center Architecture and Cloud Concepts	due by 11:59pm
Sun Feb 25, 2024	Assignment Lesson 22: Ensuring Network Availability	due by 11:59pm
	Assignment Lesson 23: Cable Connectivity Issues and Tools	due by 11:59pm
Sun Mar 3, 2024	Assignment Lesson 24: Network Troubleshooting Methodology	due by 11:59pm
	Assignment Lesson 25: Network Software Tools and Commands	due by 11:59pm
Sun Mar 17, 2024	Assignment Pre-Assessment Exam	due by 11:59pm
Sun Mar 24, 2024	Assignment Practice Exam A	due by 11:59pm
Sun Mar 31, 2024	Assignment Practice Exam B	due by 11:59pm
	Page Exam Instructions	to do: 11:59pm

Date	Details	Due
	Page Professor Messer Videos	to do: 11:59pm
Sun Apr 7, 2024	Assignment Post Assesment Exam	due by 11:59pm
Tue Apr 9, 2024	Assignment Exam Appointment Confirmation	due by 11:59pm
Fri Apr 26, 2024	Assignment Exam Results	due by 11:59pm
	Assignment Course Points	