

Point Loma Nazarene University
Mathematical, Information and Computer Sciences
School of STEM
CSC 3112 Network+ Exam Prep
Spring 2025 – 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:

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")

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.

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 in accordance with the Americans with Disabilities Act (ADA). 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 work with the student to create an Accommodation Plan (AP) that outlines allowed accommodations. The EAC makes accommodations available to professors at the student's request.

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. Accommodations are not retroactive so clarifying with the professor at the outset is one of the best ways to promote positive academic outcomes.

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. Students cannot assume that because they had accommodations in the past, their eligibility at PLNU is automatic. All determinations at PLNU must go through the EAC process. This is to protect the privacy of students with disabilities who may not want to disclose this information and are not asking for any special accommodations.

DEPARTEMENT SYLLABUS POLICY STATEMENTS

These general policies apply to this course:

<https://docs.google.com/document/d/18i1pUoY0iCfB8w7JKxVvACQW309X-JRB/edit?usp=sharing&ouid=116164865489739533893&rtpof=true&sd=true>

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 15, 2025	Page Purchase uCertify Access Code	to do: 11:59pm
	Page Register with CompTIA	to do: 11:59pm
Sun Jan 19, 2025	Assignment Lesson 1: Introduction to Networks	due by 11:59pm
	Assignment Lesson 2: The Open Systems Interconnection (OSI) Reference Model	due by 11:59pm

Date	Details	Due
Sun Jan 26, 2025	Assignment Lesson 3: Networking Connectors and Wiring Standards	due by 11:59pm
	Assignment Lesson 4: The Current Ethernet Specifications	due by 11:59pm
	Assignment Lesson 5: Networking Devices	due by 11:59pm
Sun Feb 2, 2025	Assignment Lesson 6: Introduction to the Internet Protocol	due by 11:59pm
	Assignment Lesson 7: IP Addressing	due by 11:59pm
	Assignment Lesson 8: IP Subnetting, Troubleshooting IP, and Introduction to NAT	due by 11:59pm
Sun Feb 9, 2025	Assignment Lesson 10: Routing Protocols	due by 11:59pm
	Assignment Lesson 11: Switching and Virtual LANs	due by 11:59pm
	Assignment Lesson 9: Introduction to IP Routing	due by 11:59pm
Sun Feb 16, 2025	Assignment Lesson 13: Remote Network Access	due by 11:59pm
	Assignment Lesson 12: Wireless Networking	due by 11:59pm
	Assignment Lesson 14: Using Statistics and Sensors to Ensure Network Availability	due by 11:59pm
Sun Feb 23, 2025	Assignment Lesson 15: Organizational Documents and Policies	due by 11:59pm
	Assignment Lesson 16: High Availability and Disaster Recovery	due by 11:59pm

Date	Details	Due
Sun Mar 2, 2025	Assignment Lesson 17: Data Center Architecture and Cloud Concepts	due by 11:59pm
	Assignment Lesson 18: Network Troubleshooting Methodology	due by 11:59pm
	Assignment Lesson 19: Network Software Tools and Commands	due by 11:59pm
Sun Mar 9, 2025	Assignment Lesson 20: Network Security Concepts	due by 11:59pm
	Assignment Lesson 21: Common Types of Attacks	due by 11:59pm
Sun Mar 23, 2025	Assignment Pre-Assessment Exam	due by 11:59pm
Sun Mar 30, 2025	Assignment Practice Exam A	due by 11:59pm
Sun Apr 6, 2025	Assignment Practice Exam B	due by 11:59pm
	Page Exam Instructions	to do: 11:59pm
	Page Professor Messer Videos	to do: 11:59pm
Sun Apr 13, 2025	Assignment Post Assesment Exam	due by 11:59pm
Tue Apr 15, 2025	Assignment Exam Appointment Confirmation	due by 11:59pm
Fri May 2, 2025	Assignment Exam Results	due by 11:59pm
	Assignment Course Points	