

Course Syllabus

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Point Loma Nazarene University

CSC 3112 Network+ Exam Prep

Spring 2023 – Online (2 Credit Hours)

Time and Place: Online and anytime

Instructor: Maria Zack, Ph.D.

mzack@pointloma.edu (<mailto:mleih@pointloma.edu>)

Office Hours:

Some in person or Zoom and some on Zoom only (see below) - [Click here for appointment](https://calendar.google.com/calendar/selfsched?sstoken=UUphMmZJc2tIVTFKfGRIZmF1bHR8YTE5OTI3YWQxZDFhZDc4MDExZWQ5ZjU3MDRhNmNkN)
([https://calendar.google.com/calendar/selfsched?
sstoken=UUphMmZJc2tIVTFKfGRIZmF1bHR8YTE5OTI3YWQxZDFhZDc4MDExZWQ5ZjU3MDRhNmNkN](https://calendar.google.com/calendar/selfsched?sstoken=UUphMmZJc2tIVTFKfGRIZmF1bHR8YTE5OTI3YWQxZDFhZDc4MDExZWQ5ZjU3MDRhNmNkN))

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 11:00 AM -12:00 PM and 2:30-3:00 PM (Zoom only)

Tuesday 7:30-8:30 AM and 4:30-5:30 PM (Zoom only)

Wednesday 11:30 AM - 12:00 PM and 5:00-6:00 PM (Zoom only)

Thursday 8:30-9:30 AM (Zoom only) and 4:00-5:30 PM

Friday 10:30 AM - 12:00 PM

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

Course Description:

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:

Course Grade Distribution Table

Grade	Percentage	Grade	Percentage
A	92-100%	C	72-76.9%

A-	90 - 91.9%	C-	70 - 71.9%
B+	87 - 89.9%	D+	67 - 69.9%
B	82 - 86.9%	D	62 - 66.9%
B-	80 - 81.9%	D-	60 - 61.9%
C+	77 - 79.9%	F	0 - 59.9%

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** [\(https://www.professormesser.com/network-plus/n10-008/n10-008-video/n10-008-training-course/\)](https://www.professormesser.com/network-plus/n10-008/n10-008-video/n10-008-training-course/) 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.

Technical Support:

Please contact IT Services (ITS) at 619-849-2222 for technical support if your account gets locked out or you need a password reset. If you call after hours (between 6 pm and 11 pm), and the matter is urgent, you may leave a voice mail message and mark the message as urgent. The on-call technician will respond to you within 30 minutes.

University Mission:

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 becomes an expression of faith. Being of Wesleyan heritage, we aspire 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.

Attendance:

Attendance is expected at each class session. In the event of an absence, you are responsible for the material covered in class and the assignments given that day.

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. Because this course is a self-paced online course, 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** (https://catalog.pointloma.edu/content.php?catoid=52&navoid=2919#Class_Attendance) 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.

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.

Academic Accommodations:

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.

Students wishing to receive accommodations for the official CompTIA certification exam, must contact CompTIA and request the accommodation themselves through PersonVue at

<https://home.pearsonvue.com/test-taker/Test-accommodations.aspx>. 

[_This process can take several weeks so students must begin the process early to seek an accommodation. The university can not assist in the CompTIA accommodation request, it is the student's responsibility to apply directly with PersonVue and to provide the required paperwork.](https://home.pearsonvue.com/test-taker/Test-accommodations.aspx)

Academic Honesty:

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 Policies in the Graduate and Professional Studies Catalog for definitions of kinds of academic dishonesty and for further policy information.

Etiquette and Behavior:

Students are expected to actively and positively engage in the adult learning environment. Behaviors that disrupt the classroom environment and interfere with the learning of others are prohibited. Examples

of disruptive behavior include talking with other students during a presentation or when others are speaking, texting, gaming, internet browsing, or reading non-course related materials. All cell phones and other electronic communication devices will be turned off at the beginning of class. Tablets and computers are allowed in class for note-taking purposes only, unless otherwise directed by the instructor. Should a student's behavior become disruptive to the productivity of the course they will be asked to leave the classroom and not receive credit for attendance.

In the online environment, students are expected to also be actively and positively engaged in an adult learning environment and consider the complexities of engaging in discussions in an online environment. Disagreeing with each other and engaging in debates about ideas is encouraged to better understand each other's ideas and perspectives. Such discussions should never involve personal comments, offensive or inappropriate language, or either aggressive or passive aggressive verbiage.

Students who wish to share feedback about the course, program, PLNU, or any administration, faculty, or staff should not do so within course discussions, assignments, or projects and should meet one-on-one with the professor or program director. A classroom or an online learning environment is not the proper place to discuss feedback about the university or any university representatives.

Persons not enrolled in the course are not permitted to be present in class. This policy includes family/friends of students and potential students.

When working with PLNU staff, faculty and administrators, and other students, students are expected to communicate and act respectfully. Any aggression or disrespect to any party may result in up to and including suspension from PLNU. See Academic Behavior Policy in the Graduate and Professional Studies Catalog for definitions of behaviors and further policy information.

E-mail and Messages:

It is expected that students regularly use e-mail. The instructor will periodically send you information and updates via e-mail and/or via canvas. In the first week of class you must activate your PLNU e-mail account if you are not currently using it. Please send questions about specific problems or course details to the instructor by posting them in Canvas so that all members of the class can see the response.

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** (<https://www.pointloma.edu/offices/office-institutional-effectiveness-research/disclosures>) 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.

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, which includes and working computer with the chrome browser and a stable internet connection. 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.







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 11, 2023	 Purchase uCertify Access Code	to do: 11:59pm
	 Register with CompTIA	to do: 11:59pm
Sun Jan 15, 2023	 Lesson 1: Introduction to Networks (https://canvas.pointloma.edu/courses/66431/assignments/868442)	due by 11:59pm
	 Lesson 2: The Open Systems Interconnection Specifications (https://canvas.pointloma.edu/courses/66431/assignments/868449)	due by 11:59pm
	 Lesson 3: Networking Connectors and Wiring Standards (https://canvas.pointloma.edu/courses/66431/assignments/868450)	due by 11:59pm
Sun Jan 22, 2023	 Lesson 4: The Current Ethernet Specifications (https://canvas.pointloma.edu/courses/66431/assignments/868451)	due by 11:59pm
	 Lesson 5: Networking Devices (https://canvas.pointloma.edu/courses/66431/assignments/868452)	due by 11:59pm
Sun Jan 29, 2023	 Lesson 6: Introduction to the Internet Protocol (https://canvas.pointloma.edu/courses/66431/assignments/868453)	due by 11:59pm
	 Lesson 7: IP Addressing (https://canvas.pointloma.edu/courses/66431/assignments/868454)	due by 11:59pm
	 Lesson 8: IP Subnetting, Troubleshooting IP, and Introduction to NAT (https://canvas.pointloma.edu/courses/66431/assignments/868455)	due by 11:59pm

Date	Details	Due
Sun Feb 5, 2023	 <u>Lesson 10: Routing Protocols</u> (https://canvas.pointloma.edu/courses/66431/assignments/868432)	due by 11:59pm
	 <u>Lesson 11: Switching and Virtual LANs</u> (https://canvas.pointloma.edu/courses/66431/assignments/868433)	due by 11:59pm
	 <u>Lesson 9: Introduction to IP Routing</u> (https://canvas.pointloma.edu/courses/66431/assignments/868456)	due by 11:59pm
Sun Feb 12, 2023	 <u>Lesson 12: Wireless Networking</u> (https://canvas.pointloma.edu/courses/66431/assignments/868434)	due by 11:59pm
	 <u>Lesson 13: Using Statistics and Sensors to Ensure Network Availability</u> (https://canvas.pointloma.edu/courses/66431/assignments/868435)	due by 11:59pm
	 <u>Lesson 14: Organizational Documents and Policies</u> (https://canvas.pointloma.edu/courses/66431/assignments/868436)	due by 11:59pm

Date	Details	Due
Sun Feb 19, 2023	 Lesson 15: High Availability and Disaster Recovery (https://canvas.pointloma.edu/courses/66431/assignments/868437)	due by 11:59pm
	 Lesson 16: Common Security Concepts (https://canvas.pointloma.edu/courses/66431/assignments/868438)	due by 11:59pm
	 Lesson 17: Common Types of Attacks (https://canvas.pointloma.edu/courses/66431/assignments/868439)	due by 11:59pm
	 Lesson 18: Network Hardening Techniques (https://canvas.pointloma.edu/courses/66431/assignments/868440)	due by 11:59pm
	 Lesson 19: Remote Access Security (https://canvas.pointloma.edu/courses/66431/assignments/868441)	due by 11:59pm
Sun Feb 26, 2023	 Lesson 20: Physical Security (https://canvas.pointloma.edu/courses/66431/assignments/868443)	due by 11:59pm
	 Lesson 21: Data Center Architecture and Cloud Concepts (https://canvas.pointloma.edu/courses/66431/assignments/868444)	due by 11:59pm
	 Lesson 22: Ensuring Network Availability (https://canvas.pointloma.edu/courses/66431/assignments/868445)	due by 11:59pm
Sun Mar 5, 2023	 Lesson 23: Cable Connectivity Issues and Tools (https://canvas.pointloma.edu/courses/66431/assignments/868446)	due by 11:59pm
	 Lesson 24: Network Troubleshooting Methodology (https://canvas.pointloma.edu/courses/66431/assignments/868447)	due by 11:59pm
	 Lesson 25: Network Software Tools and Commands (https://canvas.pointloma.edu/courses/66431/assignments/868448)	due by 11:59pm

Date	Details	Due
Sun Mar 19, 2023	 <u>Pre-Assessment Exam</u> (https://canvas.pointloma.edu/courses/66431/assignments/868460)	due by 11:59pm
Sun Mar 26, 2023	 <u>Practice Exam A</u> (https://canvas.pointloma.edu/courses/66431/assignments/868458)	due by 11:59pm
Sun Apr 2, 2023	 <u>Practice Exam B</u> (https://canvas.pointloma.edu/courses/66431/assignments/868459)	due by 11:59pm
Sun Apr 2, 2023	 <u>Exam Instructions</u>	to do: 11:59pm
Sun Apr 2, 2023	 <u>Professor Messer Videos</u>	to do: 11:59pm
Sun Apr 9, 2023	 <u>Post Assesment Exam</u> (https://canvas.pointloma.edu/courses/66431/assignments/868457)	due by 11:59pm
Tue Apr 11, 2023	 <u>Exam Appointment Confirmation</u> (https://canvas.pointloma.edu/courses/66431/assignments/868430)	due by 11:59pm
Sun Apr 23, 2023	 <u>Exam Results</u> (https://canvas.pointloma.edu/courses/66431/assignments/868431)	due by 11:59pm
Sun Apr 23, 2023	 <u>Course Points</u> (https://canvas.pointloma.edu/courses/66431/assignments/868429)	