

**Point Loma Nazarene University**  
**CIT3014 Networking**  
**Fall 2024- Hybrid (4 Credit Hours)**  
**Quad 2**

<b>Time and Place:</b>	Wednesday Evenings 6:00 pm – 10:00 pm
	Grossmont Community College Campus - Room 34-170
Final Exam	Dec. 18. 9:00 pm
<b>Instructor:</b>	Christian Vaca
<b>Email:</b>	cvaca@pointloma.edu
<b>Office Hours:</b>	By Appointment

Students are welcome to contact me via email to schedule an appointment for a mutually convenient time. Appointments can be face-to-face on the Grossmont Campus, on the phone, or via a video conference call.

**Text:** Text is included as an electronic copy in the course.

If students would prefer a written copy of the textbook, they may purchase one at their own expense.

CompTIA Network+ Study Guide: Exam N10-009, 6th Edition  
Author: Todd Lammle  
Publisher: Wiley Sybex  
ISBN: 978-1-394-23560-5

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**Needed Supplies:**

Access to a computer (with Windows OS) with at least a 2.0 GHz four-core processor, 6GB of RAM, 100GB of available storage, and the ability to add software, a high-speed internet connection, Microsoft Word and Excel, and an Image editor (Microsoft paint or mac image viewer).

**Content:**

The CIT3014 course is designed to provide an in-depth understanding of a wide range of network architectures and configuration options. The course explores the concepts of physical and virtual network design options and network administration requirements. The course will cover the topics of wired and wireless networking, network optimization and management, virtual local area networks, network types, network hardware and software, and networking standards. In addition, students will acquire hands-on experience by working with networking and security simulators. This course aligns with topics covered in the CompTIA's Network+ certification exam.

**Philosophy and Approach:**

Research in learning theory shows that students who learn technology effectively must be actively involved in the process, not just passive listeners/observers. In particular, in order to really learn and understand technological ideas and concepts, one must become deeply involved in activities such as exploring, discussing, analyzing,

explaining, testing, and evaluating. To do this, you need good problems to solve, interaction with others on solutions, and opportunities to write your own conclusions and present your ideas.

The learning experience and background of the students in CIT 3014 can vary widely. This means that different students will need to spend different amounts of time to learn the material. To help assist in this process, the class is designed as a hybrid class. Students will be completing reading, pre-tests, lab simulations, and optional video activities online. This will allow students to spend the amount of time needed to learn the basics before we engage in activities in class. Class time will be used for questions and answers, hands-on lab activities, highlighting more difficult concepts, student presentations, and closed-book examinations.

**Objectives:**

The course is designed to help you:

- Acquire knowledge and develop an understanding of foundational concepts and problem-solving skills in computer networking.
- Introduce students to all the CompTIA Network+ exam objectives.

**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 routers and switch information to create an IP-based LAN/WAN.
5. Students will be able to explain network security risks 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 60% or more in the course to earn a passing grade of "D-" but also must maintain a 2.0 GPA with the entire CIT program.**

Your grade for the course is based on the following:

Activity	Points	Percentage
Chapter Quizzes	170	12%
Weekly Test	420	29%
Weekly Labs	120	8%
Online Labs	288	20%
Presentations	60	4%
Weekly Questions	85	6%
Final Exam	300	21%
Total	1443	100%

The grading scale for the course, in percentages of the maximum points in class is:

<b>A</b>	92.50 - 100%	<b>C</b>	72.50 - 77.49%
<b>A-</b>	90.00 - 92.49%	<b>C-</b>	70.00 - 72.49%
<b>B+</b>	87.50 - 89.99%	<b>D+</b>	67.50 - 69.99%
<b>B</b>	82.50 - 87.49%	<b>D</b>	62.50 - 66.49%
<b>B-</b>	80.00 - 82.49%	<b>D-</b>	60.00 - 62.49%

C+	77.50 - 79.99%	F	0 - 59.99%
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**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 4-unit class delivered over eight 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:

Reading	51
Videos and Chapter Highlights	42
Quizzes and Quiz Prep	12
Online Labs	15
In-Class Labs	14
Presentation Preparation	10
Final Exam Preparation	6
Total Hours	150

**Weekly Questions:**

Students will make posts regarding the weekly reading on either topics they found interesting or topics/questions for which they would like further explanation. Student posts are to be submitted in the weekly question discussion forum in Canvas at least 24 hours before the start of the class. Postings that are late will have a one-point deduction, and postings after the start of class will earn zero points.

**Chapter Quizzes:**

After each chapter reading, there will be a chapter quiz to help students self-assess their reading comprehension and understanding. This quiz is available online and must be completed before the start of class. Students will be allowed two attempts on each chapter quiz. Attempts after the due date / time will not be accepted.

**Weekly Exams:**

Weekly exams will be given in class (taken online using HonorLock) and will be closed-book. Weekly exams are more comprehensive than chapter practice quizzes and will test the student's understanding and comprehension of the material for a given week. Students must have a laptop in class (with WiFi access) to take these exams and must use their host OS. The use of a virtual machine is not allowed during exams.

**Online Labs:**

Each chapter will have a series of online labs that will simulate various activities discussed in the chapter. Students should complete these labs prior to class.

**Weekly In-Class/Homework Labs:**

Each week, a series of hands-on labs and student questions will be introduced and started in class. Students will need to complete a minimum level of activity in the lab during class, complete the lab write-up after class, and submit their findings and documented activities prior to the next class session.

**Presentations:**

Each student will be assigned two presentation assignments to be given in class. The date and topic of the presentation will be assigned by the instructor or students will self-select their time and topic based on instructor guidance. Presentations will be between 5 and 10 minutes in length. The presentation document (PowerPoint)

and accompanying research documentation (MS Word) will be submitted 24 hours prior to the start of class when the presentation will be given.

### **Videos:**

Each week, a set of videos will be available to be viewed before the start of class, covering topics specific to the CompTIA exam objectives. These videos will supplement the reading material offered online.

### **Final Exam: Date and Time**

The final exam for this course will be given during the last hour of the last class meeting. The final exam will be comprehensive and cover all the CompTIA exam objects covered in the course. For the final exam, students must use their host OS on their laptop. The use of a virtual machine is not allowed during exams. The final exam is closed book and will be timed (60 minutes). The final exam schedule is set by the university and can not be taken early.

Successful completion of this class requires taking the final examination on its scheduled day. **If you ever miss the exam without giving the instructor prior notice and making arrangements to take the exam at a different time, there is a good chance you will receive a zero unless, of course, there was clearly an emergency.**

### **Late Work and Missed Work:**

On-line labs and In-class labs may be submitted late with a 10% point deduction penalty per day. No assignment will be accepted after it is more than 5 days late. Missed weekly quizzes, student presentations, and the final exam cannot be completed late unless the student has prior written agreement from the instructor. Missed weekly quizzes, student presentations, and the final exam will receive zero points. Chapter quizzes attempted after the due date / time will receive zero points.

### **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:**

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements.

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 withdrawal date or, after that date, receive an "F" grade.

Students who anticipate being absent for an entire week of a course should contact the instructor in advance for approval and make arrangements to complete the required coursework and/or alternative assignments assigned at the discretion of the instructor. Acceptance of late work is at the discretion of the instructor and does not waive attendance requirements.

Refer to [Academic Policies](#) for additional details.

### **Synchronous Attendance/Participation Definition**

For synchronous courses that have specific scheduled meeting times (including in-person, hybrid, and synchronous online courses), absences are counted from the first official meeting of the class regardless of the date of the student's enrollment. Courses with specific attendance requirements are outlined in the course syllabus.

### **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](mailto:EAC@pointloma.edu) or 619-849-2486). Once a student's eligibility for 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 ensure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

### **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 [Adult Undergraduate Academic and General Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

During the first week of class, you will be asked to submit an Academic Honesty Verification Statement. Submitting the statement is a requirement of this course. By submitting the Academic Honesty Verification Statement, you will be verifying all assignments completed in this course were completed by you. Carefully review the Academic Honesty Statement below.

Statement: "In submitting this form, I am verifying all the assignments in this course will be completed by me and will be my own work."

### **Artificial Intelligence (AI) Policy:**

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, iA Writer, Marmot, Botowski) to generate ideas, but you are not allowed to use AI tools to generate content (text, video, audio, images) that will end up in any work submitted to be graded for this course unless explicitly called for in the assignment instructions. If you have any doubts about using AI, please gain permission from the instructor.

### **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 requires 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.

### **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.

### **Copyright Protected Materials:**

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 Spiritual Care**

PLNU strives to be a place where you grow as a whole person. To this end, we provide resources for our Graduate and Adult Undergraduate students to encounter God and grow in their Christian faith. At the Mission Valley (MV) campus, we have an onsite chaplain who is available during class break times across the week. If you have questions for, desire to meet, or share a prayer request please email [mvchaplain@pointloma.edu](mailto:mvchaplain@pointloma.edu).

In addition, on the MV campus, there is a prayer chapel on the third floor which is open for use as a space set apart for quiet reflection and prayer.

### **Email 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 email 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.

### **Some Tips About This Class:**

- Set aside at least 10 - 15 hours each week to complete learning sessions.
- Come to class fully prepared to participate in learning by completing all assigned reading, reading quizzes, online labs, and videos.

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

## **Assignments-At-A-Glance**

The course summary below lists our assignments and their due dates. Click on any assignment to review it.