


Course Syllabus

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Course Information

 <p>School of STEM</p>	<p>Computer Information Technology</p> <p>CIT3074: Cloud Computing</p> <p>4 Units</p>
<p>Spring 2025 - Hybrid - Quad 2</p>	

Time and Place:	Wednesday evenings 6:00 pm – 10:00 pm
	Grossmont Community College Campus - Room 34-170
Final Exam:	May 7, 2025. 8:45 pm - A score 50% or greater on the final exam is required to pass the course
Instructor:	Christian Vaca
Email:	cvaca@pointloma.edu
Office Hours:	By Appointment


Office Hours

By appointment at a time mutually convenient to the student and the instructor.

Students are **welcome and encouraged to contact me** via e-mail or phone to schedule an appointment. Appointments can be face-to-face (F2F) in our classroom (e.g., before class) or at another convenient location on one of the PLNU campuses, on the phone, or via a video conference call.

Textbook

Text is included as an electronic copy in the course material.

- For a hard copy of the textbook see: Ben Piper. CompTIA Cloud+ Study Guide, 3rd Edition, Sybex, Wiley Publishing, ISBN: 978-1119810865
- For APA formatting see the [Purdue Online Writing Lab](https://owl.english.purdue.edu/owl/resource/560/01/)  (<https://owl.english.purdue.edu/owl/resource/560/01/>).

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Needed Supplies

You must have access to a laptop -- that must be brought to each F2F class session. This laptop should be configured, preferably with Windows OS, with at least 50GB of available storage and the ability to add software, a high-speed Internet connection (i.e., WiFi), Microsoft Word, and an Image editor (Microsoft Paint or Mac image viewer).

Course Description

The CIT3074 course is designed to provide students with an in-depth introduction to cloud computing. The course introduces the concepts of cloud configuration and deployment, security, maintenance, management, and troubleshooting. Hands-on labs with cloud technologies such as Microsoft Azure and AWS will give students practical experience working with cloud technologies. This course aligns with topics covered in the CompTIA's Cloud+ 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 conclusions and present ideas. We will use all of these approaches in our class.

The learning experience and background of the students in CIT 3074 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 the reading, practice quizzes, 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 problems solving skills for cloud computing.
- Understand and address all of the CompTIA Cloud+ exam objectives.

Institutional Learning Outcomes

1. **Learning, Informed by our Faith in Christ**

Students will acquire knowledge of human cultures and the physical and natural world while developing skills and habits of the mind that foster lifelong learning.

2. **Growing, In a Christ-Centered Faith Community**

Students will develop a deeper and more informed understanding of others as they negotiate complex professional, environmental and social contexts.

3. **Serving, In a Context of Christian Faith**

Students will serve locally and/or globally in vocational and social settings.

Program Learning Outcomes

The Point Loma Nazarene University Adult Degree Completion (ADC) CIT program is designed to prepare students for expanded roles within his or her organization through enhanced abilities to:

1. Identify and evaluate information technology infrastructure necessary to meet an organization's business needs.
2. Develop, plan and evaluate appropriate processes for managing information systems and information technology projects.
3. Design, develop, and evaluate software solutions to meet an organization's business needs.
4. Apply their technical knowledge to solve problems.
5. Speak about their work with precision, clarity, and organization (Oral Communication)
6. Write about their work with precision, clarity, and organization (Written Communication)
7. Collaborate effectively in teams.
8. Identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy).
9. Gather relevant information, examine information, and form a conclusion based on that information (Critical Thinking).
10. Understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).

11. Understand the professional, ethical, legal, security, and social issues and responsibilities that come with the implementation and use of information technology.

Course Learning Outcomes

The following student learning outcomes will be met in this course:

1. Explain the various cloud service models and be able to select the appropriate model given a set of requirements.
2. Explain and expand on cloud storage strategies and virtual networking concepts.
3. Compare and contrast various cloud maintenance strategies and operational requirements.
4. Create cloud-based virtual services and networks.
5. Explain and develop cloud security policies and best practices.
6. Troubleshoot common cloud computing problems by utilizing common networking and service tools.
7. Explain various strategies and operational best practices for managing cloud services.

Grading

Your grade for the course is based on:

Grading

Activity	Total Points	Percentage
Syllabus / Practice Quizzes	210	17%
Weekly Exams	360	29%
Weekly Labs	210	17%
Online Labs	93	7%
Weekly Questions & Discussion	85	7%
Classroom Presentation	30	2%
Final Exam	260	21%
Total	1248	100%

Students **must earn 60% or more of the available points in the class and 50% or more of the points on the final exam** to earn a passing grade in the course.

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

A	92.50 - 100%	C	72.50 - 77.49%
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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%

Credit Hour Information: Distribution of Student Learning Hours

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:

Credit Hours

Reading	42
Videos and Chapter Highlights	21
Quizzes and Quiz Preparation	12
Online Labs	24
In-Class (F2F) Learning and Labs	35
Presentation Preparation	10
Final Exam Preparation	6

TOTAL Hours	150
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Chapter Practice Quizzes

After each chapter reading, there will be a practice quiz to help you self-assess your reading comprehension and understanding. **These practice quizzes are available online and must be completed before the start of class.** You will be allowed two attempts on each of the reading quizzes.

Weekly Tests

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. The weekly test must be taking on your host Operating System. The use of a virtual machine is not allowed during the exam.

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.

AWS Cloud Labs

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

Presentation

Each student will select a topic and date to complete one presentation to be given in class. The date and topic of the presentation will be selected by the students (or the instructor if the students do not complete a selection by the end of week 02). The presentation length will be between 5 and 10 minutes. For each presentation, the presentation document (Powerpoint slides) and accompanying research documentation (a minimum 500 word, APA formatted paper) will be submitted **24 hours prior to the start of class** when the presentation will be given.

Final Examination

The final examination will be comprehensive and cover all the CompTIA exam objects covered in the course. The exam is closed book, will be timed, and will occur on the last F2F class session. **The final exam (and all exams) must be taken on your host Operating System. The use of a virtual machine is not allowed during the exam. A score of 50% or greater is required to earn a passing grade in the course.**

Late Work

Online labs and AWS cloud labs may be submitted late with a 10% point deduction penalty per day. No assignment will be accepted after it is more than 4 days late. Missed chapter practice quizzes, weekly quizzes, student presentations, and the final exam cannot be completed late unless the student has prior written agreement from the instructor. Late or missing chapter practice quizzes, weekly quizzes, student presentations, and the final exam will receive zero points.

Classroom Etiquette

Students are expected to actively engage in an adult learning environment. Behaviors that disrupt the classroom environment and interfere with the learning of others are prohibited. Examples include talking with other students during a presentation or when others are speaking, texting, gaming, internet browsing, or reading non-course-related materials. All pagers, cellphones, and other electronic communication devices will be turned off at the beginning of class. Tablets and computers are allowed in class for note-taking, quizzes, and lab purposes only unless otherwise directed by the instructor. Arriving late and leaving early is strongly discouraged and disruptive to the class.

Respect others' opinions. Be considerate while your peers are speaking and actively engage them only when they have completed their point. Discourteous comments and side conversations will not be tolerated and will be addressed openly and directly by the instructor. Should a student's behavior become disruptive to the productivity of the course he/she will be asked to leave the classroom and not receive credit for attendance.

University 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 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.

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 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 (<mailto: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 ensure 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.

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. If you have any doubts about using AI, please gain permission from the instructor.


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 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.

Some Tips About This Class





- Set aside at least 10 - 15 hours each week to complete the week's learning sessions.
- Come to class fully prepared to participate in learning by completing all assigned reading, the reading quizzes, online labs, and videos.
- If you have a question, please **ASK!**















Additional Course Information














[Additional PLNU policies and practices](https://docs.google.com/document/d/1RcF7S-KrVqgSVzclL1SnUjTlalcySL8l/edit?usp=sharing&oid=116164865489739533893&rtpof=true&sd=true%20)  (<https://docs.google.com/document/d/1RcF7S-KrVqgSVzclL1SnUjTlalcySL8l/edit?usp=sharing&oid=116164865489739533893&rtpof=true&sd=true%20>) that apply to this course can be found at the following link:














<https://docs.google.com/document/d/1RcF7S-KrVqgSVzclL1SnUjTlalcySL8l/edit?usp=sharing&oid=116164865489739533893&rtpof=true&sd=true> 
(<https://docs.google.com/document/d/1RcF7S-KrVqgSVzclL1SnUjTlalcySL8l/edit?usp=sharing&oid=116164865489739533893&rtpof=true&sd=true>)














Course Summary:









Date	Details	Due
Sun Mar 16, 2025	 <u>Week 01 Overview (Ch 01)</u>	to do: 11:59pm
Tue Mar 18, 2025	 <u>Chapter 01 Questions - Due 24 hours before class</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126173)	due by 6pm
	 <u>Chapter 01 Reading</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126190)	due by 6pm
Wed Mar 19, 2025	 <u>Syllabus Quiz - Not accepted late</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126171)	due by 6pm

Date	Details	Due
	 <u>Academic Honesty Verification Statement</u> https://canvas.pointloma.edu/courses/78463/assignments/1126170	due by 6pm
	 <u>AWS Cloud Lab 1 Welcome Assignment - Not accepted late</u> https://canvas.pointloma.edu/courses/78463/assignments/1126180	due by 6pm
	 <u>Chapter 01 Online Labs</u> https://canvas.pointloma.edu/courses/78463/assignments/1126188	due by 6pm
	 <u>Chapter 01 Practice Quiz</u> https://canvas.pointloma.edu/courses/78463/assignments/1126189	due by 6pm
	 <u>Ch01 Exam</u> https://canvas.pointloma.edu/courses/78463/assignments/1126166	due by 10pm
Sun Mar 23, 2025	 <u>Week 02 Overview (Ch 02)</u>	to do: 11:59pm
Tue Mar 25, 2025	 <u>Chapter 02 Questions - Due 24 hours before class</u> https://canvas.pointloma.edu/courses/78463/assignments/1126174	due by 6pm
	 <u>Chapter 02 Reading</u> https://canvas.pointloma.edu/courses/78463/assignments/1126193	due by 6pm
	 <u>AWS Cloud Lab 2</u> https://canvas.pointloma.edu/courses/78463/assignments/1126181	due by 6pm
	 <u>Chapter 02 Online Labs</u> https://canvas.pointloma.edu/courses/78463/assignments/1126191	due by 6pm
Wed Mar 26, 2025	 <u>Chapter 02 Practice Quiz</u> https://canvas.pointloma.edu/courses/78463/assignments/1126192	due by 6pm
	 <u>Ch02 Exam</u> https://canvas.pointloma.edu/courses/78463/assignments/1126161	due by 10pm
Sun Mar 30, 2025	 <u>Week 03 Overview (Ch 03 & 04)</u>	to do: 11:59pm
Tue Apr 1, 2025	 <u>Chapter 03 and 04 Questions - Due 24 hours before class</u>	due by 6pm

Date	Details	Due
	(https://canvas.pointloma.edu/courses/78463/assignments/1126175)	
	 Chapter 03 Reading (https://canvas.pointloma.edu/courses/78463/assignments/1126196)	due by 6pm
	 Chapter 04 Reading (https://canvas.pointloma.edu/courses/78463/assignments/1126199)	due by 6pm
	 AWS Cloud Lab 3 (https://canvas.pointloma.edu/courses/78463/assignments/1126182)	due by 6pm
	 Chapter 03 Online Labs (https://canvas.pointloma.edu/courses/78463/assignments/1126194)	due by 6pm
	 Chapter 03 Practice Quiz (https://canvas.pointloma.edu/courses/78463/assignments/1126195)	due by 6pm
Wed Apr 2, 2025	 Chapter 04 Online Labs (https://canvas.pointloma.edu/courses/78463/assignments/1126197)	due by 6pm
	 Chapter 04 Practice Quiz (https://canvas.pointloma.edu/courses/78463/assignments/1126198)	due by 6pm
	 Ch03&04 Exam (https://canvas.pointloma.edu/courses/78463/assignments/1126162)	due by 10pm
Sun Apr 6, 2025	 Week 04 Overview (Ch 05 & 06)	to do: 11:59pm
	 Chapter 05 and 06 Questions - Due 24 hours before class (https://canvas.pointloma.edu/courses/78463/assignments/1126176)	due by 6pm
Tue Apr 8, 2025	 Chapter 05 Reading (https://canvas.pointloma.edu/courses/78463/assignments/1126202)	due by 6pm
	 Chapter 06 Reading (https://canvas.pointloma.edu/courses/78463/assignments/1126205)	due by 6pm
Wed Apr 9, 2025	 AWS Cloud Lab 4 (https://canvas.pointloma.edu/courses/78463/assignments/1126183)	due by 6pm

Date	Details	Due
	 <u>Chapter 05 Online Labs</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126200)	due by 6pm
	 <u>Chapter 05 Practitce Quiz</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126201)	due by 6pm
	 <u>Chapter 06 Online Labs</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126203)	due by 6pm
	 <u>Chapter 06 Practice Quiz</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126204)	due by 6pm
	 <u>Mid-Course Survey</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126169)	due by 6pm
	 <u>Ch05&06 Exam</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126163)	due by 10pm
Sun Apr 13, 2025	 <u>Easter Week Online Overview</u>	to do: 11:59pm
Fri Apr 18, 2025	 <u>Online Week Discussion - Not accepted late</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126172)	due by 11:59pm
Tue Apr 22, 2025	 <u>Chapter 07 Questions - Due 24 hours before class</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126177)	due by 6pm
	 <u>Chapter 07 Reading</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126208)	due by 6pm
Wed Apr 23, 2025	 <u>AWS Cloud Lab 5</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126184)	due by 6pm
	 <u>Chapter 07 Online Labs</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126206)	due by 6pm
	 <u>Chapter 07 Practice Quiz</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126207)	due by 6pm

Date	Details	Due
	 <u>Ch07 Exam</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126165)	due by 10pm
	 <u>Chapter 08 and 09 Questions -</u> <u>Due 24 hours before class</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126178)	due by 6pm
Tue Apr 29, 2025	 <u>Chapter 08 Reading</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126211)	due by 6pm
	 <u>Chapter 09 Reading</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126214)	due by 6pm
	 <u>AWS Cloud Lab 6</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126185)	due by 6pm
	 <u>Chapter 08 Online Labs</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126209)	due by 6pm
	 <u>Chapter 08 Practice Quiz</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126210)	due by 6pm
Wed Apr 30, 2025	 <u>Chapter 09 Online Labs</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126212)	due by 6pm
	 <u>Chapter 09 Practice Quiz</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126213)	due by 6pm
	 <u>Ch08&09 Exam</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126167)	due by 10pm
	 <u>Chapter 10 Questions - Due 24</u> <u>hours before class</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126179)	due by 6pm
Tue May 6, 2025	 <u>Chapter 10 Reading</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126217)	due by 6pm
Wed May 7, 2025	 <u>AWS Cloud Lab 7</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126186)	due by 6pm

Date	Details	Due
	 <u>Chapter 10 Online Labs</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126215)	due by 6pm
	 <u>Chapter 10 Practice Quiz</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126216)	due by 6pm
	 <u>Official Course Evaluation</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126220)	due by 6pm
	 <u>AWS Cloud Lab 8 - In class</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126187)	due by 9pm
	 <u>Final Exam - Part 1 (Closed Reference)</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126164)	due by 10pm
	 <u>Final Exam - Part 2 (Open Reference)</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126168)	due by 10pm
	 <u>Final Exam Adjustment</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126218)	
	 <u>In Class Presentation (Instructions and Posting) - Due 24 hours before class on the week you present.</u> (https://canvas.pointloma.edu/courses/78463/assignments/1126219)	