UVU UTAH VALLEY UNIVERSITY™

Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: https://catalog.uvu.edu/

Semester: Spring
Course Prefix: CS
Course Title: Computer Networks I

Year: 2025
Course and Section #: 2600-602
Credits: 3

Course Description

A rigorous introduction to computer networking theory and technologies for Computer Science and Information Technology majors. Includes theory of data communications protocols; theory and design of transmission systems; transmission media; and communication software. Emphasizes the lower layers of the Open Systems Interconnection model. Requires lab exercises to be completed outside of lecture.

This course is a discipline core requirement for several degrees, including:

- B.S. Software Engineering
- B. S. Computer Science - multiple emphases
- B. A. S. Software Development

Course Attributes
This course has the following attributes:
☐ General Education Requirements
☐ Global/Intercultural Graduation Requirements
☐ Writing Enriched Graduation Requirements
☒ Discipline Core Requirements in Program
☒ Elective Core Requirements in Program
☐ Open Elective
Other: *Click here to enter text.*

Instructor Information
Instructor Name: Dr. Jason Gill

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- Explain how computer networks are used
- Describe the primary models for network architectures and data communications standards
- Describe data transmission media and signaling
- Describe the principal error detection schemes
- Explain data link control protocols
- Describe the primary Local Area Network architectures
- Describe networking hardware
- Explain packet switching, Wide Area Network Architectures and Asynchronous Transfer Mode
- Discuss basic Internet Protocol (IP) and Transport Protocol (TCP and UDP) concepts.

In compliance with departmental accreditation by ABET, the Computing and Networking Sciences Department has established program objectives that apply to the bachelor's degree in computer science. Those objectives are available on the UVU CS Dept. website,Links to an external site.

Course Materials and Texts

Required materials, fees and technology:

Required textbook: Computer Network I from ZyBooks.

1. Sign in or create an account at learn.zybooks.com
2. Enter zyBook code: UVUCS2600GillSpring2025
3. Subscribe

Lab access fee of $45 for computers applies.

All other materials are provided in Canvas.

Course Requirements

Course Assignments, Assessments, and Grading Policy

Assignments:

The activity assignments in zyBooks are designed to lead you through the topic. Be sure to read everything, and watch all of the animated diagrams to completion. These assignments can be done repeatedly to get the grade that you would like.

There are two varieties of labs in Zybooks - walkthrough and scenario labs. The walkthrough labs guide you step by step through a process. The scenario labs allow you to take a real-world scenario and apply the walkthrough to a task. Both types of labs can be repeated if you would like to improve your grade.

The chapter quizzes draw from the material of the module. You can take the quiz up to three times. The questions are taken from a bank and will likely not repeat. Your highest score will be kept.

Discussions:

Discussions will be opportunities to explore topics together. Posts to the discussion should add significantly to the conversation and support your point of view. Comments that do not add significantly to a discussion will receive no credit. It is okay to disagree in a discussion. In fact much learning happens when we disagree. However we need to be respectful and keep our online classroom a safe place to learn.

Due dates for discussions correspond with the initial post date which is usually a Thursday. Responses to initial posts are due by Monday. You will need to respond to 3 of your classmates.

Assessments:

There is a midterm and a final exam. The midterm covers Module 1 - 6, and the final exam covers Module 7 - 13.

On the midterm, you will have three attempts. Your highest score will be kept. You must finish the exam before the closure date and time. Please plan accordingly.

The final exam has two attempts. Your highest score will be kept. You need to finish the exam before the closure date and time.

Required or Recommended Reading Assignments
Required textbook: Computer Network I from ZyBooks

General Description of the Subject Matter of Each Lecture or Discussion
Course Orientation
Network types, topologies, and characteristics
Conceptual models and network devices
Address types
Segmentation
Protocols
Switches and routers
Network security
Wireless networking
Network services
Network architecture
Network operations
Network troubleshooting

Required Course Syllabus Statements

Generative AI

Artificial Intelligence (AI) Expectations and Requirements

Students should use ChatGPT or other AI tools as if it were a person. If asking another person to do task X is cheating, then asking ChatGPT and similar tools is cheating. If not, then not.

Using Remote Testing Software

☒ This course does not use remote testing software.

☐ This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

Required University Syllabus Statements

Accommodations/Students with Disabilities
Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU [Accessibility Services](#) at [accessibilityservices@uvu.edu](#) or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at [DHHservices@uvu.edu](#)

DHH is located on the Orem Campus in BA 112.

Academic Integrity
At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their [rights and responsibilities](#). In each course, they are responsible for knowing the requirements and restrictions regarding research and

writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in UVU Policy 541: *Student Code of Conduct*.

Equity and Title IX
Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation
UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.
To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a specially dedicated space for meditation, prayer, reflection, or other forms of religious expression.