All information technology professionals must be knowledgeable in computer networking technologies and infrastructure. Knowing how to install, configure, and troubleshoot a computer network is a highly marketable and exciting skill. This course first introduces the fundamental building blocks that form a modern network, such as protocols, topologies, hardware, and network operating systems. It then provides in-depth coverage of the most important concepts in contemporary networking, such as TCP/IP, Ethernet, wireless transmission, and security.

**Prerequisites: Junior standing**

**Credits: 4**

This course will prepare you to select the best network design, hardware, and software for your environment. You will also have the skills to build a network from scratch and maintain, upgrade, and troubleshoot an existing network.

**Students will be able to . . .**

Illustrate the uses of computer networks.

Illustrate the uses of network hardware, including the use of hubs, switches, and routers.

**Assessments**

Rubric-based assignments, projects, and/or exams.

Rubric-based assignments, projects, and/or exams.
Illustrate the uses of network software, including networking operating systems.

| Rubric-based assignments, projects, and/or exams. |

Distinguish each layer of the ISO/OSI Reference Model, including physical, datalink, network, and application protocols.

| Rubric-based assignments, projects, and/or exams. |

Distinguish the functionality of each layer of the TCP/IP Reference Model compared with the ISO/OSI Reference Model.

| Rubric-based assignments, projects, and/or exams. |

Examine major components of computer networks, based upon the ISO/OSI Reference Model.

| Rubric-based assignments, projects, and/or exams. |

Summarize computer network security issues.

| Rubric-based assignments, projects, and/or exams. |

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**Specific course faculty and materials will vary by quarter. Current information can be found on my.cwu.edu.**

**ITAM classes are often offered in online, hybrid or traditional formats. Visit my.cwu.edu for more details or contact our office at ITAMInfo@cwu.edu.**

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**University Policy on Academic Integrity**

Academic Integrity is a standard set for this course. Students are expected to complete all of their coursework and assignments using their original words and ideas and will properly cite the words and ideas of others.

Students are also expected to be honest in their interactions with the instructor. A student found to have not upheld these expectations is subject to failing this course and shall be subject to disciplinary action or sanction. The University catalog defines the term “academic dishonesty” in all its forms including, but not limited to:

- cheating on tests;

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**University Policy on Special Needs**

If you have a disability that may prevent you from meeting course requirements, contact the instructor immediately to file a Student Disability Statement and to develop an Accommodation Plan.

Course requirements will not be waived but reasonable accommodations will be developed to help you meet the requirements. You are expected to work with the instructor and the CWU Disability Support Specialist to develop and implement a reasonable Accommodation Plan. For more information please visit: [www.cwu.edu/disability-support/](http://www.cwu.edu/disability-support/)
- copying from another student's test paper;
- using materials during a test not authorized by the person giving the test;
- collaboration with any other person during a test without authority;
- knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of an un-administered test or information about an un-administered test; bribing any other person to obtain an un-administered test or information about an un-administered test; substitution for another student or permitting any other person to substitute for oneself to take a test; plagiarism” which shall mean the appropriation of any other person’s work and the unacknowledged incorporation of that work in one’s own work offered for credit;
- "Collusion" which shall mean the unauthorized collaboration with any other person in preparing work offered for credit.

Canvas

The TurnItIn feature of Canvas helps students learn to use sources and citations appropriately. TurnItIn matches the material in student papers against material on the Internet and in our database of CWU papers. Representing the words or ideas of someone else as your own is a violation of the CWU Student Conduct Code and a serious infraction in this course. If you have questions about appropriate ways to include the words or ideas of other people in your papers, contact the instructor. Papers submitted to TurnItIn are added to the database of papers. Your instructor has the option of what papers and assignments may be submitted and/or randomly submitted to TurnItIn.

Central Washington University is a community of scholars and writers who are supported by the University Writing Center. Peer consultants guide students of all disciplines and all levels toward communication that will be effective in a global and diverse environment. Visit: www.cwu.edu/learning-commons/university-writing-center for more information.

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