

CPTR456 - Computer Networks  
Walla Walla University - School of Engineering  
Winter 2021

Professor: Larry Aamodt, PhD, PE  
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Textbook: Computer Networking: A Top-Down Approach, 7ed  
(required) by James F. Kurose and Keith W. Ross; Pearson, 2010

Prerequisite: CPTR-242. Data Structures

Meeting time Lecture at 10am MWF will typically be on-line using Teams but may at times meet in-person. Thursday 10am class will meet in KRH-348, the Linux Lab.

Bulletin: Overview of computer networks in theory and practice. Students will describe the various network protocol layers, write programs using application layer protocols such as HTTP, DNS, and sockets; describe transport layer protocols such as TCP and UDP; explain strategies for congestion control; discuss network layer concepts such as IP addressing, switching, and routing; and implement link layer technologies such as Ethernet, wireless, and virtual LANS. Offered even years.  
Prerequisite: CPTR 242. 4 credits.

Handouts: Handouts may be given and unless stated otherwise, **you are expected to treat handouts as a textbook, i.e. read and understand them.**

Class notes: Material may be presented in lecture that is not in the handouts. Take notes. This material is fair game for tests.

Homework: Homework is due at the start of class on the day it is due. Homework turned in after class starts will loose 10%. Late work should be avoided, but if submitted will be reduced an additional 10% per day. Not accepted more than a week late.

Your work: I expect everything you turn in for grading to be your work and represent your understanding of the material. Homework, labs, or tests that include work that is not your own will receive a score of zero. The only exception is a group or team assignment. At the instructors discretion, cheating will be rewarded with an F as the final grade for the class.

(your work continued) Recognizing that a cooperative study session may enhance understanding, here is my expectation. In general, sharing ideas and strategies verbally will be acceptable in the context of a study group but sharing written work is not. Validating your answers with the group after all members of the group have successfully completed a problem may be acceptable. A rule of thumb is that you need to be responsible for your own work meaning that you understand what you did, you could reproduce it on your own if asked, and you did not copy the solution work from someone else or a solution manual.

Grade composition: Homework, quizzes - 20%  
Labs - 25%  
Participation - 5%  
Midterm - 25%  
Final - 25%  
The instructor reserves the right to shift this distribution to best serve the needs of the class. Scoring generally follows 90,80,70,60% for A,B,C,D but scores may be curved when needed.

Missed exams will receive a score of zero and cannot be made up. (Contact me prior to test time if illness prevents attendance)

Help: Out of class help from the instructor is available for those who attend class and thoroughly read the text and handouts (translation: please attend class regularly). If you have questions please come by my office, send email, or call me at the home or office (note the phone numbers at the top of the syllabus). I'm eager to help you but can only do so if you contact me. Because of Covid I am working from home most of the time and calling me there is good. Calls from 8am to 10pm are ok.

Web Sites: I have a faculty web page for this class, found at [people.wallawalla.edu/~larry.aamodt/cptr456](http://people.wallawalla.edu/~larry.aamodt/cptr456), that I will use for posting information. Homework assignments will be posted there as well as reference material or links to additional reference material. Occasionally an assignment or lab needs clarification after it is handed out. Check the web page to see if additional information or changes have been posted. D2L will be used for homework submissions and lab report submissions.

Special needs: Students who have disabilities and desire special accommodation must determine the required accommodation in consultation with Disability Support Services (527-2366) and must also inform the instructor of this class.

## Walla Walla University (WWU) - Seventh Day Adventist Higher Education

### WWU Integrity policy:

[www.wallawalla.edu/academics/academic-administration/academic-policies/academic-integrity-policy/](http://www.wallawalla.edu/academics/academic-administration/academic-policies/academic-integrity-policy/)

### WWU Emergency information

WWU is committed to having a safe campus. Emergency information is at:

[www.wallawalla.edu/campus-life/student-life/campus-security](http://www.wallawalla.edu/campus-life/student-life/campus-security)

### WWU Disability accommodations

In addition to the phone number 527-2366, see:

[www.wallawalla.edu/?id=4318](http://www.wallawalla.edu/?id=4318)

### WWU Title IX sex discrimination and sexual misconduct policy

WWU prohibits all forms of sex discrimination and sexual misconduct including, but not limited to, sex-based intimidation and harassment, sexual harassment, domestic violence, dating violence, stalking and sexual violence. If you have been subjected to, or are aware of, an instance of sex discrimination or sexual misconduct, you are highly encouraged to report it to the Title IX coordinator, through the Title IX webpage, or by calling (509) 527-2141. The University has resources to help.

Title IX coordinator email address: [cassandre.beccai@wallawalla.edu](mailto:cassandre.beccai@wallawalla.edu)

Title IX web page: [www.wallawalla.edu/resources/human-resources-payroll/titleix/](http://www.wallawalla.edu/resources/human-resources-payroll/titleix/)

### Relationship of this class to the WWU core themes

This course promotes the mission of Walla Walla University in general and the Computer Science program in particular through the following goals. Upon completion of this course, students will have:

#### Excellence in Thought

Developed demonstrable understanding of and skill in computer networking.

#### Generosity in Service

Contributed to the shared learning in class and developed skills that can be utilized in service to others.

#### Beauty in Expression

Become proficient in writing clear and well-formatted code to solve specific problems.

#### Faith in God

Brought glory to God through earnest work and effort.

A life with inner peace comes through faith in God.