

# CTC 228 – Introduction to Operating Systems and Networks

California State University Dominguez Hills  
Department of Computer Science and Technology  
Fall 2016

<b>Instructor</b>	Malcolm McCullough	<b>E-Mail</b>	mmccullough@csudh.edu
<b>Classroom</b>	SAC-2102	<b>Class Time</b>	MW 8:30-9:45& 10:00-11:00 AM
<b>Office</b>	SAC-1115 or SCC-800 (TTh)	<b>Office Hours</b>	MW:11:00-13:00 & TTh:15:00-16:00

## COURSE DESCRIPTION:

This course acquaints students with basic networking concepts such as TCP/IP, local/wide area networking as well as emerging industry topics such as Radio Frequency Identification (RFID), Global Information Systems (GIS), Networked Attached Storage (NAS), and WiMAX.

**PRE-REQUISITE:** CSC 116: with a C or better, students should also be familiar with the installation, upgrade and troubleshooting of personal computers, and Consent of Instructor.

## TEXTBOOKS



### [Required]:

Guide to Networking Essentials, 6th edition, by Greg Tomsho,  
ISBN 13: 978-1-4188-3718-1 © 2007 ISBN 10: 1-4188-3718-0

**COURSE GOALS:** This course provides students with basic networking concepts such as TCP/IP, local/wide area networking, Switched Networks, VLANs, Determining IP Routes, IP addressing (netmasks, subnets, supernets), Managing IP traffic with Access Lists, Establishing Point-to-Point connections, and Establishing Frame Relay Connections. The course also addresses emerging industry topics such as Radio Frequency Identification (RFID), Global Information Systems (GIS), Networked Attached Storage (NAS), Cable Installation and Management, as well as Fixed and Mobile WiMAX. Additionally awareness and understanding of Existing Government Standards/Terms will be introduced, such as Trusted Computers, Rainbow Series Reports, Federal Information Processing Standards, The Committee on National Security Systems, etc. which impact Government Operating Systems and Networks

## COURSE OUTCOMES:

### Upon completion of the course the students will be able to:

- Describe (and possibly install) the hardware and software required to be able to communicate across a network.
- Describe, compare and contrast network communications using two examples of layered models.
- Describe the physical, electrical, and mechanical properties and standards associated with copper media used in networks.
- Describe the physical, electrical, and mechanical properties and standards associated with optical media used in networks.
- Describe the standards and properties associated with the transmission and reception of wireless signals used in networks.
- Describe what is required to install a simple WLAN.
- Explain the issues associated with the transmission of signals on networking media.
- Describe the principles and practice of switching on an Ethernet network.
- Describe the operation of RFID and GIS
- Describe briefly how Government Standards impacting Operating Systems and Networks security

# CTC 228 – Introduction to Operating Systems and Networks

California State University Dominguez Hills  
Department of Computer Science and Technology  
Fall 2016

## AMERICANS WITH DISABILITIES ACT

CSUDH adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with temporary and permanent disabilities. If you have a disability that may adversely affect your work in this class, I encourage you to register with Disabled Student Services (DSS) and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: no accommodation can be made until you register with the DSS. For information call (310) 243-3660 or to use the Telecommunications Device for the Deaf, call (310) 243-2028 or goto: <http://www4.csudh.edu/dss/>

## COMPUTER INFORMATION LITERACY EXPECTATIONS

It is expected that students will:

1. Use Microsoft Word for word processing unless otherwise approved by the instructor,
2. Be familiar with using email as a communication tool and check your official campus email account at least every other day;
3. Be able to access websites and online course materials which may require Flash and other plug-ins;
4. Use the library databases to find articles, journals, books, databases and other materials;
5. Be able to create an effective PowerPoint presentation;
6. Be able to record audio (ideally video) to share with the instructor via the web; and
7. Have regular access to a computer and internet access for the term of this course.

## ACADEMIC INTEGRITY

Academic integrity is of central importance in this and every other course at CSUDH. You are obliged to consult the appropriate sections of the University Catalog and obey all rules and regulations imposed by the University relevant to its lawful missions, processes, and functions. **All work turned in by a student for a grade must be the students' own work.** Plagiarism and cheating (e.g. stealing or copying the work of others and turning it in as your own) will not be tolerated, and will be dealt with according to University policy. The consequences for being caught plagiarizing or cheating range from a minimum of a zero grade for the work you plagiarized or cheated on, to being dropped from the course.

## BEHAVIORAL STANDARDS

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. The instructor may require a student responsible for disruptive behavior to leave class pending discussion and resolution of the problem and may also report a disruptive student to the Student Affairs Office (WH A-410, 310-243-3784) for disciplinary action.

## COURSE POLICIES:

- Deliverables (Class Assignments, Projects) submitted late are not accepted without obtaining instructors permission prior to due date.
- Deliverables (Class Assignment, Projects) not submitted before the end of the final class will earn 0%.
- Any exceptional, non-academic circumstances need to be discussed with the instructor as soon as they arise, prior to the due date of the deliverable. At the time of the discussion, NO make-up work will be assigned.

The instructor reserves the right not to award credit for deliverables that are incomplete. Partial credit is awarded at the instructor's discretion, and only for work that merits such an award. Assignments that are incomplete or incongruous with the specifications may be returned to the student.

**EXAMs:** There will be three exams. The first exams will be given during the 5th week, the second exam will be given during the 10th week and the final exam will be given on the date posted in the final examination schedule printed in the campus Class Schedule. The exams will be closed book/notes and include material from the book and lectures. Students are responsible for the any and all materials that will be presented in lecture and textbook. No makeup or early exams will be administered; unless there are serious, unforeseen, and unavoidable circumstances and the student notifies the instructor as soon as possible.

# CTC 228 – Introduction to Operating Systems and Networks

California State University Dominguez Hills  
Department of Computer Science and Technology  
Fall 2016

**ASSIGNMENTS AND PROJECTS:** There will be multiple lab assignments and projects assigned during the semester. They will be announced in class (and posted on blackboard). All assignments/projects must be handed to the instructor in at the beginning of class on the date due (no late work). The computer-print out homework is preferable, but hand-written is also acceptable if writing is legible. All assignments **must include in the upper left hand corner, the course name, assignment/project name/number, section number, and name of student.**

## GRADES:

The following grading scale will be used:

Score	Grade	Score	Grade
91-100	A	90	A-
89	B+	81-88	B
80	B-	79	C+
71-78	C	70	C-
69	D+	64-69	D
0-63	F		

## GRADING:

The weighting of the coursework is listed below:

Exam One	20%
Exam Two	20%
Final Exam	20%
Assignments/Quizzes	40%

# CTC 228 – Introduction to Operating Systems and Networks

California State University Dominguez Hills  
 Department of Computer Science and Technology  
 Fall 2016

TOPIC OUTLINE (Will be conducted according the following. However, the schedule of the topics schedule or timetable will vary)

## Tentative Course Schedule

Week #	Topic		
		<i>Reading Assignment</i>	<i>Labs</i>
Week 1	Introduction to Computer Networks	Chapter 1	TBA
Week 2	Network Hardware Essentials	Chapter 2	TBA
Week 3	Network Topologies and Technologies	Chapter 3	TBA
Week 4	Network Media	Chapter 4	TBA
Week 5	<b>Exam One</b>	Chapter 1-4	
Week 6	Network Protocols	Chapter 5	TBA
Week 7	Network Protocols	Chapter 5	TBA
Week 8	Network Reference Models and Standards	Chapter 6	TBA
Week 9	Network Hardware in Depth	Chapter 7	TBA
Week 10	<b>Exam Two</b>	Chapter 5-7	
Week 11	Network Operating System Fundamentals	Chapter 8	TBA
Week 12	Server Management and Administration	Chapter 9	TBA
Week 13	Introduction to Network Security	Chapter 10	TBA
Week 14	Supporting a Small-Business Network	Chapter 11	TBA
Week 15	Wide Area Network Essentials	Chapter 12	TBA
Week 16	<b>Final Exams Week</b>	The Final Exam: 8-12	