CS 2705	Network Fundamentals and Design Spring Semester 2016

Instructor	Kyle Feuz Office: TE 111C Phone: 801-626-7864 E-mail: kylefeuz@weber.edu Office Hours: M,W 11:30-12:30 pm, T,TH, 10:30-11:30am Office Hours @ D2 226: M,W: 4:45 – 5:20 pm
Classroom	D2 226
Days	M,W
Time	5:30-7:20 PM
Texts	*TCP/IP Protocol Suite* (4th Edition) by Behrouz A Forouzan. ISBN 978-0-07-337604-2
Description	A comprehensive examination of the hardware and software components of a network and the practical techniques for designing and implementing computer systems in a network. Topics will include the purpose and use of various wide and local area Networks, Ethernet, TCP/IP UDP/IP and other protocols, media type and structures (repeaters, bridges, switches, hubs, routers with routing algorithms, and gateways), signaling/data encoding, multiplexing, error detection/correction and flow control, packet formats, network classes, and subnetting and network security.
Learning Outcomes	• gain a sound understanding of the basic networking terminology • analyze the theory of networking • recognize types of network protocols • identify wide and local area networks • implement simple UDP and TCP protocols
Class	Class will consist of lectures, discussions, assignments, quizzes and exams. Questions and comments are encouraged. It is expected that students will read the material related to each week's coursework.
Assignments / Discussions / Projects	There will be weekly assignments for the class. Assignments will consist of short answer, discussion topics, and projects. The specifics of each assignment will be posted weekly on Monday. The due date for each assignment will be the following week on Sunday at 11:59 pm (unless otherwise specified.) Late assignments will be accepted with a 10% penalty per day up to 5 days to provide for unforeseen circumstances. There will be an 8 hour grace period during which no late penalty will be assessed. Assignments count for 45% of the final grade.
Quizzes	There will be weekly quizzes for the class, worth 10 points each. A quiz will be posted on Saturday each week and will be due on the following Wednesday before class (with exception of the two weeks where we have exams.) You may take the quiz as many times as you want and the highest score will be kept. Your lowest two quiz scores will be dropped to provide for unforeseen circumstances. Quizzes count for 15% of the final grade.
Exams	There will be three exams for the class. Exams count for 40% of the final grade (the Midterm Exams being worth 10% each, and the Final Exam being worth 20%.)

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<tr><td>Accommodations for disabilities</td><td>Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 221 of the Student Services Center here at the Davis Campus. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary. You can also call 801-395-3524 or visit http://www.weber.edu/ssd for more details.</td></tr>
<tr><td>Grading</td><td>
<table>
<tr><td>Quizzes</td><td>15%</td></tr>
<tr><td>Assignments</td><td>45%</td></tr>
<tr><td>Exams</td><td>40%</td></tr>
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The final grade will be given based on points accumulated through quizzes, assignments and exams. Standard grading will apply:

<table>
<tr><td>94 – 100</td><td>A</td><td></td><td>74 – 76</td><td>C</td></tr>
<tr><td>90 – 93</td><td>A-</td><td></td><td>70 – 73</td><td>C-</td></tr>
<tr><td>87 – 89</td><td>B+</td><td></td><td>67 – 69</td><td>D+</td></tr>
<tr><td>84 – 87</td><td>B</td><td></td><td>64 – 67</td><td>D</td></tr>
<tr><td>80 – 83</td><td>B-</td><td></td><td>60 – 63</td><td>D-</td></tr>
<tr><td>77 – 79</td><td>C+</td><td></td><td>0 – 59</td><td>E</td></tr>
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</td></tr>
<tr><td>Allocated Time</td><td>You should anticipate spending two to three hours of study per week for each credit hour of a university course. Computer and programming classes typically require time in the upper range.</td></tr>
<tr><td>Canvas</td><td>This course will have a strong online component via the Canvas course management system. To log on to the course, go to http://canvas.weber.edu, and follow the login instructions. You will need your WSU wildcat name and password to log in. You should have already received this information from the admissions department. If you still have problems getting into the course, please email me and I will see if I can resolve the issue.

If you are unfamiliar with Canvas, go to https://learn-wsu.uen.org/courses/8878 for a student orientation. Click on the links on the left side of the page. PDF help documents are available at http://departments.weber.edu/ce/distancelearning/CanvasFAQ.aspx</td></tr>
<tr><td>Policies</td><td>Exams can only be taken on the days given unless arrangements are made to take them ahead of time. If you do not take the final and you do not have a passing grade you will be given a UW.</td></tr>
<tr><td>Cheating</td><td>Students are expected to maintain academic ethics and integrity in regards to performing their own work. The WSU Student Code states clarifies cheating.
1. Cheating, which includes but is not limited to:
a. Copying from another student's test paper;
b. Using materials during a test not authorized by the person giving the test;
c. Collaborating with any other person during a test without authority;
d. Knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of any test, without authorization of the appropriate official;</td></tr>
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	e. Bribing any other person to obtain any test; f. Soliciting or receiving unauthorized information about any test; g. Substituting for another student or permitting any other person to substitute for oneself to take a test. 2. Plagiarism, which is the unacknowledged (uncited) use of any other person or group's ideas or work. This includes purchased or borrowed papers; 3. Collusion, which is the unauthorized collaboration with another person in preparing work offered for credit; 4. Falsification, which is the intentional and unauthorized altering or inventing of any information or citation in an academic exercise, activity, or record-keeping process; 5. Giving, selling or receiving unauthorized course or test information; 6. Using any unauthorized resource or aid in the preparation or completion of any course work, exercise or activity; 7. Infringing on the copyright law of the United States which prohibits the making of reproductions of copyrighted material except under certain specified conditions; CS Department policy dictates that any verifiable evidence of student academic cheating, as defined and determined by the instructor, will result in: 1) an automatic failing grade for the class and 2) a report to the Dean of Students that will include the student's name and a description of the student's dishonest conduct.

Class Schedule and Course Outline

Week of	Topic	Coursework
Jan. 11 Week 1	Ch. 1: Introductions Network Demonstrations Ch. 2: The OSI Model and the TCP/IP Protocol Suite	Assignment #1 Quiz #1
Jan. 18 Week 2	No Monday Classes Ch. 3: Underlying Technologies Ch. 4: Introduction to the Network Layer	Assignment #2 Quiz #2
Jan. 25 Week 3	Ch. 5: IPv4 Addresses Ch. 6: Delivery and Forwarding of IP Packets	Assignment #3 Quiz #3
Feb. 01 Week 4	Ch. 7: Internet Protocol Version 4 (IPv4) Ch. 5: Subnetting	Assignment #4 Quiz #4
Feb. 08 Week 5	Ch. 26: IPv6 Addressing Ch. 27: IPv6 Protocol	Assignment #5 Quiz #5
Feb. 15 Week 6	Review Ch 8: Address Resolution Protocol (ARP) Ch. 9: Internet Control Message Protocol Version 4	**Midterm Exam 1**
Feb. 22 Week 7	Ch. 11: Unicast Routing Protocols Ch. 12: Multicasting and Multicast Routing Protocols	Quiz #6 Assignment #6
Feb. 29 Week 8	Ch. 13: Introduction to the Transport Layer Ch. 14: User Datagram Protocol (UDP)	Quiz #7
Mar. 7 Week 9	**Spring Break**	
Mar. 14 Week 10	Ch. 15: Transmission Control Protocol (TCP) Ch. 16: Stream Transmission Control Protocol(STCP) Ch. 17: Introduction to the Application Layer	Assignment #7 Quiz #8
Mar. 21 Week 11	Review Socket Programming (UDP)	 **Midterm Exam 2**
Mar. 28 Week 12	Ch. 18: Host Configuration: DHCP Ch. 19: Domain Name System (DNS)	Assignment #8 Quiz #9
Apr. 04 Week 13	Ch. 20: Remote Login TELNET and SSH Ch. 21: File Transfer: FTP and TFTP Ch. 23 Electronic Mail: SMTP, POP, IMAP	Assignment #9 Quiz #10
Apr. 11 Week 14	Socket Programming (TCP) Ch. 22: World Wide Web and HTTP	Assignment #10 Quiz #11
Apr. 18 Week 15	Ch. 29: Cryptography and Network Security Ch. 30: Internet Security	 Quiz #12
Apr. 25	Review **Final Exam – Comprehensive (Apr. 26 - 28)**	**Final Exam**