JOHNSON COUNTY COMMUNITY COLLEGE
COURSE SYLLABUS
CS & IT Division
Department of Information Technology-Networking
Networking Fundamentals
IT 140-382
Fall 2018

Instructor: Akram Al-Rawi
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Office Hours: On campus M T W: 8:00 -9:30 A.M, R: 9:00-11:00

Course Information:

Class Meeting Times and Location: Hybrid W 6:00-8:50 RC 350, October 24th- December 12th

Credit Hours: 4

Prerequisites/corequisites: None

Textbook: (optional). We will use Cisco Networking Academy Online Curriculum
Introduction to Networks v6 Companion Guide
By Cisco Networking Academy
Ciscopress.com
ISBN-13: 978-1-58713-360-2
Copyright: 2017

Required Class Materials: None

Course Description:
Networking Fundamentals is the first of four courses in the Cisco Certified Network Associate (CCNA) curriculum. This course introduces the architecture, structure, functions, components, and models of the internet and other computer networks. The principles and structure of Internet Protocol (IP) addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple Local Area Network (LANs), perform basic configurations for routers and switches, and implement IP addressing schemes. 3 hrs. lecture/wk, 2 hrs. open lab/wk.

Course Objectives:
Upon successful completion of this course the student should be able to perform the following functions:

1. Understand and describe the devices and services used to support communications in data networks and the Internet.
2. Use Cisco command-line interface (CLI) commands to perform basic router and switch configurations.
3. Understand and describe the role of protocol layers in data networks.
4. Explain fundamental Ethernet concepts, such as media, services and operations.
5. Understand and describe the importance of addressing and naming schemes at various layers of data networks in IPv4 and IPv6 environments.
6. Design, calculate and apply subnet masks and addresses to fulfill given requirements in IPv4 and IPv6 networks.
7. Utilize common network utilities to verify small network operations and analyze data traffic.
8. Build a simple Ethernet network using routers and switches.

*Detailed course objectives can be viewed on the Course Outline at:
http://catalog.jccc.edu/coursedescriptions/it/#IT_140

Attendance:
We will take attendance. You need to be in the class at least during the last two periods to take the final exam and the final skill assessment. We follow the college attendance policy.
http://www.jccc.edu/about/leadership-governance/policies/students/academic/attendance.html

Faculty Initiated Withdrawal: None
Late Work and Makeup Policy: Labs and tests will not be accepted for credit after due dates unless you have a legitimate reason. Chapter exam will be enabled for one week; Homework drop boxes will be enabled for one week.

Student Code of Conduct: Students are bound by all sections of the JCCC Student Code of Conduct
http://www.jccc.edu/about/leadership-governance/policies/students/student-code-ofconduct/index.html as well as the Student Handbook -
http://www.jccc.edu/studentresources/student-handbook.html

Academic Dishonesty, Cheating, or Plagiarism:

No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials. This includes students who aid and abet, as well as those who attempt such behavior.
ADA Compliance: http://www.jccc.edu/about/leadership-governance/policies/accessibilitystatement.html
To schedule an appointment with an Access Advisor or for additional information, you can contact Access Services at (913) 469-3521. Access Services is located on the 2nd floor of the Student Center (SC 202).

Campus Safety: Information regarding student safety can be found at
http://www.jccc.edu/student-resources/police-safety/.

Classroom and campus safety are of paramount importance at Johnson County Community College, and are the shared responsibility of the entire campus population. Please review the following:

- Report Emergencies: to Campus Police (available 24 hours a day) In <u>person</u> at the Carlsen Center (CC115)
    - o <u>Call</u> 913-469-2500 (direct line) – Tip: program in your cell phone <u>Phone app</u> - download JCCC Guardian (the free campus safety app: www.jccc.edu/guardian)
        - ⬜ instant panic button and texting capability to Campus Police
    - <u>Anonymous</u> reports to KOPS-Watch www.jccc.edu/kops or 888-258-3230
- Be Alert:
    - o You are an extra set of eyes and ears to help maintain campus safety o Trust your instincts
    - o Report suspicious or unusual behavior/circumstances to Campus Police (see above)
- Be Prepared:
    - o <u>Identify</u> the red/white stripe Building Emergency Response posters throughout campus and online that show egress routes, shelter, and equipment
    - o <u>View</u> A.L.I.C.E. training (armed intruder response training - Alert, Lockdown, Inform, Counter and/or Evacuate) – Student training video: https://www.youtube.com/watch?v=kMcT4-nWSq0
    - o Familiarize yourself with the College Emergency Response Plan
- During an Emergency: Notifications/Alerts (emergencies and inclement weather) are sent to all employees and students using email and text messaging o students are automatically enrolled, see JCCC Alert - Emergency Notification
- Weapons Policy: Effective July 1, 2017, concealed carry handguns are permitted in JCCC buildings subject to the restrictions set forth in the Weapons Policy. Handgun safety training is encouraged of all who choose to conceal carry. Suspected violations should be reported to JCCC Police Department 913-469-2500 or if an emergency, you can also call 911.

Caveats:

The curriculum, labs, and assessments in this course are based on the Cisco Network Academy. Students will be issued accounts for online access to course materials.
https://www.netacad.com → to Access Cisco Academy
https://netlab.jccc.edu → to access NDG Netlab+, you need to use IE or Firefox
Netlab+ username is the JCCC id and the initial password is announced in the course announcement.

Course Evaluation & Grading Scale:

Final grade calculations will be based on the following:

Chapter Exam (11)	15%	A	90 – 100%
Cisco Hw/Labs	55%	B	80 – 89.9%

Final Exam (comp, two parts)	15%		C	70 – 79.9%
Skill Assessment (comp)	15%		D	60 – 69.9%
			F	< 60%

Drop Deadlines: To view the deadline dates for dropping this course, please refer to the schedule on the JCCC web page, under Admissions>Enrollment Dates>Dropping Credit Classes. After the 100% refund date, you will be financially responsible for the tuition charges; for details, search on Student Financial Responsibility on the JCCC web page. Changing your schedule may reduce eligibility for financial aid and other third-party funding. Courses not dropped will be graded. For questions about dropping courses, contact the Student Success Center at 913-469-3803.

Tentative Course Schedule:

Session	Date	Topic	Reading Assign.	Lab/Hw Assignment
1	October 24	• Introduction to the course 1. Exploring the Network	Chapter 1	2.2.3.4 PT 2.3.3.3 PDF
1A	October 24	2. Configuring a Network Operating System	Chapter 2	2.4.1.2 PT 2.3.3.4 PDF
2	October 31	3. Network Protocols and Communications	Chapter 3	3.2.4.6 PT 3.4.1.2 PDF
2A	October 31	4. Network Access	Chapter 4	5.1.1.7 PDF 4.2.4.4 PT
3	November 7	5. Ethernet	Chapter 5	5.2.1.7 PDF 5.3.2.8 PT
3A	November 7	6. Network Layer	Chapter 6	6.5.1.3 PT 6.5.1.2 PDF
4	November 14	7. IP Addressing	Chapter 7	7.2.4.9 PT 7.2.5.4 PDF
4A	November 14	7. IP Addressing	Chapter 7	7.3.2.7 PDF 7.4.1.2 PT
5	November 19	8. Subnetting IP Networks	Chapter 8	8.1.4.8 PDF 8.4.1.2 PT
5A	November 19	8. Subnetting IP Networks	Chapter 8	8.3.1.4PT 8.2.1.5 PDF
6	November 28	9. Transport Layer	Chapter 9	9.2.1.6 PDF 9.2.3.5 PDF
6A	November 28	10. Application Layer	Chapter 10	10.2.2.8 PDF 10.2.2.7 PT

7	December 5	11. Build a Small Network	Chapter 11	11.2.4.6 PDF 11.2.4.7 PDF
7A	December 5	11. Build a Small Network	Chapter 11	11.5.1.2 PT 11.2.4.8 PDF
8	December 12	Final Skill Assessment, closed book, you can prepare a two-sided paper		6:00-8:50 P.M
8A	December 12	Final Exam (Comprehensive, Two Parts, closed book, no browsing)		6:00-8:50 P.M

Assessment Information:

Chapter Exams: Ch1-Ch.11 are done using JCCC Canvas, two attempts, taken from the Academy chapter quizzes and chapter exams, at your convenient.

Cisco Final: Part I Ch1-Ch11 (5 %) one attempt during the class period using Cisco Networking Academy; Part II (10%) JCCC Canvas, closed book, no browsing, taken from the chapter quizzes and chapter exams.

Skill Assessment: 15%, one attempt, closed book during the class period. You may prepare one paper (two sided) of commands.