IT4400 - Cisco Routing and Switching

Fall 2019 Syllabus

This class instructs students in the installation, configuration and troubleshooting of Cisco routers and switches. The goal of this course is to prepare you for the Cisco CCNA 200-125 certification exam.

Prerequisites: IT2400 and IT3150 with a C- grade or better

Course fee: $20, used to assist in maintaining CIT infrastructure.

One section:

- IT4400-01 MWF 9am-9:50am Smith Computer Ctr 107
- Final exam: TBA

Instructor:

- Jay Sneddon
- Office: Burns 235
- Office hours: MWF 10am-10:50am, TR 3pm-3:50pm

Objectives

At the end of the course, students will be able to:

- Install and configure Cisco routers and switches
- Design and troubleshoot advanced router and switch configurations
- Understand and design effective Virtual LANs and VLAN routing
- Implement advanced routing protocols such as OSPF and EIGRP
- Utilize ACLs and NAT in a network environment
- Design and utilize advanced IPv4 and IPv6 addressing strategies
- Prepare to pass the Cisco CCNA 200-125 certification exam

Resources

REQUIRED TestOut.com

To purchase:

1 - Visit TestOut.com

2 - Go to the course shopping page and enter the pricing code 14-232TA.

3 - Under LabSim Courses for Microsoft, select TestOut Routing and Switching Pro ISBN 978-1-935080-55-8 to purchase and add to shopping cart. The price should be $129.

4 - Follow shopping cart directions to place your order

5 - When prompted enter school name exactly as Dixie State University

6 - Follow instructions on the order confirmation screen and /or your emailed invoice for accessing LabSim.

7 - Join Class IT4400 Fa 2019

Other Materials

We will occasionally use Cisco PacketTracer, which is available for Windows, Linux and Mac. The latest version of PacketTracer is available from https://www.netacad.com/. An active Cisco account is required to use PacketTracer.

This course has students building several network cables. We have a limited number of tools available, but your are welcome to use your own equipment if you wish. Lowes and Monoprice.com has excellent cable toolkits available.

Each student will be assigned routers and switches to be used for the duration of this course. The equipment will stay in the CIT lab rack but the students will be responsible for wiring, configuring and install software
and managing these switches and routers throughout the course. Access to this equipment will be provided through a serial console device. We will go over how to connect to this device in class. You may be able to access the serial console from home to work on your assignments by SSHing through a CIT department server first.

Labs

The computers in the Smith Computing Center is specially equipped for CIT courses and had Cisco PacketTracer and Wireshark installed for CIT student use.

These computers require a valid CIT username and password. If you do not already have a CIT login, visit the [CIT password self service page](#) to create one, or ask a lab assistant to help you sign up for one.

Course Information

You are responsible for being informed regarding announcements, the schedule, and other resources posted on this website. Grading and assignments are managed on [Canvas](#).

Assignments and Exams

Assignments

Assignments will be graded based on completeness and a grading rubric. Assignments build upon previous ones, as we will be building out a Windows server environment.

(See the Late Work policy for more information)

All assignments are due Saturday night at 11:59pm, unless otherwise noted on Canvas. The primary reason for this is the Smith Computing Center is not open on Sundays.

Exams

This course will feature weekly quizzes and four exams, culminating in a final.

Grading

Assignments, quizzes and exams each contribute to your point total. Assignments are 25%, TestOut 25%, Quizzes 10%, Exams 20% and the final is 20% of your grade.

Here is the grading scale: 

\[
\begin{align*}
&\geq 94 = A \\
&\geq 90 = A- \\
&\geq 87 = B+ \\
&\geq 84 = B \\
&\geq 80 = B- \\
&\geq 77 = C+ \\
&\geq 74 = C \\
&\geq 70 = C- \\
&\geq 67 = D+ \\
&\geq 64 = D \\
&< 64 = F
\end{align*}
\]

Course Policies

Absences

Students are responsible for material covered and announcements made in class. School-related absences may be made up only if prior arrangements are made. The class schedule on [Canvas](#) presented is approximate. The instructor reserves the right to modify the schedule according to class needs. Changes will be announced in class and posted to the website. Exams and quizzes cannot be made up unless arrangements are made prior to the scheduled time.

Time

Courses should require about 2 hours of outside work per lecture hour of class. This class will require about 6 hours of work per week on the part of the student to achieve a passing or higher grade. Be sure to evaluate your schedule before committing to this course.

Late work

Assignments are due on the date specified in the schedule. The instructor has the right to reject any late assignments.

Cheating and Collaboration

Limited collaboration with other students in the course is permitted and encouraged. Students may seek help learning concepts and developing programming skills from whatever sources they have available, and are encouraged to do so. Collaboration on assignments, however, must be confined to course instructors, lab assistants, and other students in the course. See the section on cheating.
Cheating will not be tolerated, and will result in a failing grade for the students involved as well as possible disciplinary action from the college. Cheating includes, but is not limited to, turning in homework assignments that are not the student’s own work. It is okay to seek help from others and from reference materials, but only if you learn the material. As a general rule, if you cannot delete your assignment, start over, and re-create it successfully without further help, then your homework is not considered your own work.

You are encouraged to work in groups while studying for tests, discussing class lectures, and helping each other identify errors in your homework solutions. If you are unsure if collaboration is appropriate, contact the instructor. Also, note exactly what you did. If your actions are determined to be inappropriate, the response will be much more favorable if you are honest and complete in your disclosure.

Where collaboration is permitted, each student must still create and type in his/her own solution. Any kind of copying and pasting is not okay. If you need help understanding concepts, get it from the instructor or fellow classmates, but never copy another’s written work, either electronically or visually. It is a good idea to wait at least 30 minutes after any discussion to start your independent write-up. This will help you commit what you have learned to long-term memory as well as help to avoid crossing the line to cheating.

College Policies

Additional college policies, calendars, and statements are available online at http://new.dixie.edu/reg/syllabus/.