INSTRUCTIONAL PACKAGE

IST 203

Advance CISCO ROUTER CONFIGURATION

Effective Term
Spring 2019

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Part I: Course Information

Effective Term: Spring 2019

COURSE PREFIX: IST 203   COURSE TITLE: Advance Cisco Router Configuration
CONTACT HOURS: 5   CREDIT HOURS: 3

RATIONALE FOR THE COURSE:
This course is a study of managing and configuring Cisco routers. This includes advance router configuration, Cisco Internetwork Operating System (IOS) software management, routing protocols configuration to include EIGRP and OSPF, IP addressing using VLSM and CIDR, and troubleshooting.

COURSE DESCRIPTION:
This course is a study of LANs, WANs, OSI models, Ethernet, token ring, fiber distributed data interface TCP/IP addressing protocol, dynamic routing, routing, and the network administrator's role and function.

PREREQUISITES/CO-REQUISITES:
IST 202 – Cisco Internetworking Concepts

REQUIRED MATERIALS:
This course does not require a book, however, an e-book is provided by the instructor. Please see the addendum for further information.

ADDITIONAL REQUIREMENTS:
This class will require considerable time and effort outside of the regular class lab hours in order to successfully complete the projects, labs, and exams.

USB Jump Drive

All assignments are due by the due date and time, no exceptions. Student must schedule time on campus in a computer lab to complete assignments until the student home computer is working properly.

TECHNICAL REQUIREMENTS:
Access to Desire2Learn (D2L), HGTC's student portal for course materials.
WaveNet and D2L email access and Netacad
Students should have a good working knowledge of how to use the Internet.

Web browser, Comodo Ice Dragon, Mozilla Firefox or Google Chrome are preferred
We will be using notepad++ and FileZilla for this course. These are free downloads that can be accessed by the student for use at home.

CLASSROOM ETIQUETTE:
As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

NETIQUETTE: is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit Online Netiquette.

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

- Describe hierarchical small business network designs.
- Select the appropriate switch hardware features to support network requirements in small to medium-sized business networks.
- Describe the types of routers available for small to medium-sized business networks.
- Configure enhanced inter-switch connectivity technologies.
- Configure Dynamic Trunking Protocol (DTP).
- Implement link aggregation to improve performance on high-traffic switch links.
- Implement inter-VLAN routing using Layer 3 switching to forward data in a small to medium-sized business LAN.
- Configure HSRP using Cisco IOS commands.
- Explain the features and characteristics of dynamic routing protocols.
- Explain the advantages and disadvantages of using link-state routing protocols.
- Implement EIGRP for IPv4 in a small to medium-sized business network.
- Troubleshoot common EIGRP configuration issues in a small to medium-sized business network.
- Explain the process and tools used to troubleshoot an EIGRP network.
- Explain the features and characteristics of the OSPF routing protocol.
- Compare the characteristics and operations of OSPFv2 to OSPFv3.
- Explain how multi-area OSPF operates in a small to medium-sized business network.
- Configure the OSPF interface priority to influence the DR/BDR election.
- Troubleshoot missing route entries in multi-area OSPFv2 and OSPFv3 routing tables.

Students – please refer to the Instructor's Course Information sheet for specific information on assessments and due dates.

Part III: Grading and Assessment

EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS*
Students' performance will be assessed and the weight associated with the various measures/artifacts are listed below.

Chapter Tests 20%
Study Guides and Lab Assignments 40%
Final Skills Exams 20%
Practice Finals …..5%
Final Exam 15%

                                      Total Points 100%

NOTE: The final exam cannot be exempted. If you do not take the final exam, you will receive a zero (0). You must also take the final at the pre-set time for your course as outlined by the HGTC Administration. There are no make-up exams for the final.

*Students, for the specific number and type of evaluations, please refer to the Instructor's Course Information Sheet.

GRADING SYSTEM:
In keeping with the grading policy of Horry-Georgetown Technical College, grades will be assigned in the following manner:

A   90-100   B   80 – 89   C   70 – 79   D   60 – 69   F   Below 60

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the academic calendar for deadlines for add/drop. You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students

to be present for a minimum of eighty percent (80%) of his or her classes in order to be eligible to receive credit for any course. However, due to the varied nature of courses taught at the College, a more rigid attendance policy may be required by individual instructors. At a minimum, a student may be withdrawn from a course(s) after he or she has been absent in excess of ten percent (10%) of the total contact hours for a course. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

For online and hybrid courses, check your Instructor's Course Information Sheet for any required on-site meeting times. Please note, instructors may require tests to be taken at approved testing sites, if you use a testing center other than those provided by HGTC, the center may charge a fee for its services.

Part V: Student Resources

The Student Success and Tutoring Center (SSTC)

The SSTC offers to all students the following **free** resources:
1. **Academic coaches** for most subject areas, **Writing Center Support**, and **college success skills.**
2. **On-line student success and academic support resources.**

Visit the SSTC website: Student Success & Tutoring Center and visit the student services tab in your WaveNet account to schedule appointments using TutorTrac. For more information, call: SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455. Room locations and Live Chat is available on the SSTC website.

Student Information Center: WaveNet Central (WNC)

WNC offers to all students the following **free** resources:
1. **Getting around HGTC**: General information and guidance for enrollment!
2. Use the **Online Resource Center (ORC)** for COMPASS support, technology education, and online tools.
3. **Drop-in technology support or scheduled training** in the Center or in class.
4. **In-person workshops, online tutorials and more services** are available.

Visit the WNC website: [Wavenet Central](#). Live Chat and Center locations are posted on the website. Or please call one of the following locations: WNC Conway, 349-5182; WNC Grand Strand, 477-2076; and WNC Georgetown, 520-1473.

Student Testing:

Testing in an **online/hybrid** course may be accomplished in a variety of ways:
- Test administered within D2L
- Test administered in writing on paper
- Test administered through Publisher Platforms

Further more tests may have time limits and/or require a proctor.

Proctoring can be accomplished either face-to-face at an approved site or online through RPNow, our online proctoring service. To find out more about proctoring services, please visit the [Online Testing](#) section of the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

Disability Services:

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to Beth Havens, Director of Student Development on the Conway Campus, Jaime Davis, Counselor/Advisor on the Georgetown Campus or Kristin Griffin, Counselor on the Grand Strand Campus. These individuals will review documentation of the student's disability and, in a confidential setting with the student, develop an educational accommodation plan.

Note: It is the student's responsibility to self-identify as needing accommodations and to provide acceptable documentation. After a student has self-identified and submitted documentation of a disability, accommodations may be determined, accepted, and provided.

Title IX Requirements

The South Carolina Technical College System does not discriminate on the basis of race, color, gender, national or ethnic origin, age, religion, disability, marital status, veteran status, sexual orientation, gender identity, or pregnancy in educational programs and activities as required by Title IX. As outlined in the Violence Against Women Act, Horry Georgetown Technical College prohibits the offenses of domestic violence, dating violence, sexual assault, and stalking. Students who believe he or she has experienced or witnessed discrimination including sexual harassment, domestic violence, dating violence, sexual assault or stalking are encouraged to report such incidents to the Title IX Coordinators:

Dr. Melissa Batten, AVP of Student Affairs
Building 1100, Room 107A, Conway Campus
843-349-5228
Melissa.Batten@hgtc.edu

Jacquelyne Synder, AVP of Human Resources
Building 200, Room 212A, Conway Campus
843-349-5212
Jacquelyne.Barrett@hgtc.edu

*Faculty and Staff are required to report incidents to the Title IX Coordinators when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).