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│              Computer Technology Department                │
│              Business and Technology Division              │
│                Greenville Technical College                │
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COURSE SYLLABUS

Course Title: Cisco Router Configuration
Course Number: IST 202

READ THIS SYLLABUS CAREFULLY

You should read this syllabus carefully and ask your instructor about *any* aspects that you do not understand. The syllabus is an agreement between you and your instructor concerning course objectives, course content, grading, and other policies and procedures particular to this course. The following information is specific to the course. Three additional documents are provided as attachments and *are considered a part of this syllabus*:

Attachment I:

Each instructor will provide a supplement to this syllabus. The supplement will include: a week-by-week plan of instruction based on the section in which you are enrolled; your instructor's name, office hours and/or office location; and your instructor's contact information and recommended best methods to contact your instructor.

Attachment 2:

The Department responsible for developing and teaching has policies and procedures in place to assure quality instruction for all students. These are attached as "Departmental Policies and Procedures."

Attachment 3:

Please note that it is your responsibility to read the current Student Handbook included in Greenville Technical College's Catalog. (See website.) The Student Handbook addresses specific academic and student conduct policies and procedures. Excerpts from the Student Handbook representing the policies and procedures most often referred to in working with students are provided for your convenience as "Attachment 3."

Approved by: _____

Phillip Cluley, Department Head for Computer Technology
Phillip.Cluley@gvltec.edu (864) 250-8655, Barton Campus, Building 103/309

Approved by: _____   Date: _____

Joel D. Welch, Ph.D., PE
Dean, Technology Division

This syllabus will remain in effect until revised or reviewed no later than August 2016.

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Computer Technology Department
Business and Technology Division
Greenville Technical College

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COURSE SYLLABUS

Course Title: Cisco Router Configuration
Course Number: IST 202

Lecture hours per week: 3.0   **Semester credit hours:** 3.0

Prerequisite: IST201, MAT 102 or higher   **Co-requisite**: N/A

Computer Technology students must obtain a minimum grade of "C" in all CPT and IST courses.

Catalog 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.

Purpose of the Course: This course introduces the architecture, components, and operations of routers and switches in a small network. Students learn how to configure routers and switches for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPng, single area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.

Internetworking Concepts is the second of four courses that may be used to prepare for the Cisco Certified Entry Level Technician (CCENT) or Cisco Certified Network Associate (CCNA) exam.

Required text(s) or other materials:

1. *Routing and Switching Essentials Companion Guide*, Cisco Press, 2014, ISBN# 978-1-58713-318-3
    Routing and Switching Essentials Lab Manual, Cisco Press, 2013, ISBN# 978-1-58713-320-6
    Greenville Tech Bookstore Bundle ISBN# 978-1-58713-341-1

2. **Blackboard**: Students taking traditional, online, and hybrid classes must access Blackboard for course-related information.

3. **Cisco Net Academy**: Students taking traditional, online, and hybrid classes must access **netacad.com** for practice tests, online skills assessments, and online labs.

1. Communication – Students will demonstrate the ability to use active reading and listening skills and to produce effective written and oral communication for varying audiences.
2. Information Technology and Technological Literacy – Students will demonstrate competency in using computer technology within a field of study.
3. Critical Thinking/Reasoning – Students will demonstrate the ability to apply the scientific method, mathematical processes, and research skills to analyze and solve problems/issues by using reflection and reasoning to justify conclusions.
4. Professional and Personal Responsibility – Students will demonstrate the ability to exhibit conduct, attitudes, and etiquette appropriate to the student's community and chosen career. Students will demonstrate the ability to manage time, to use effective interpersonal skills, and to display responsible behavior.
5. Diversity – Students will demonstrate the ability to recognize diversity and to demonstrate respectful conduct and attitudes toward all. Students will demonstrate the ability to explain how global issues impact life, work, and opportunities.

Revised December 31, 2012

COMPUTER TECHNOLOGY PROGRAM LEVEL STUDENT LEARNING OUTCOMES

Upon successful completion of the Computer Technology degree,

1. Install computer and network hardware.
2. Install computer operating systems and application software.
3. Design, create and test computer programming solutions.
4. Demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer assignments.
5. Analyze, troubleshoot, and correct computer related technical problems.

Revised August 2012

IST 202 COURSE OUTCOMES

Students who successfully complete this course will have demonstrated the skills required to accomplish the following objectives with a minimum competence level of 70 percent.

1. Understand and describe basic switching concepts and the operation of Cisco switches for IPv4 and IPv6 networks.
2. Configure and troubleshoot switch functions.
3. Understand and describe basic routing concepts and the operation of Cisco routers for IPv4 and IPv6 networks.
4. Configure and troubleshoot router protocols and functions.
5. Use Cisco command-line interface (CLI) commands to perform router and switch configurations.

The outcomes of the IST 202 course are intended to meet the Computer Technology program level student learning outcomes.

Revised August 2014

Please refer to the Syllabus Attachment 1 in Blackboard to review the **Tentative Course Schedule**. Your instructor will provide a detailed, week-by-week plan of instruction along with method of delivery, testing, and assignment submission.

COURSE OUTLINE (UNITS):

The Cisco curriculum is available at the web site cisco.netacad.net. The text is used as an enhancement to the online curriculum. The online curriculum and review quizzes can be accessed with your user name and password. To receive full benefit from the online curriculum, be sure to visit links recommended and review audio portions.

Chapter 0: Course Introduction	Chapter 6: Static Routing
Chapter 1: Introduction to Switched Networks	Chapter 7: Routing Dynamically
Chapter 2: Basic Switching Configuration	Chapter 8: Single-Area OSPF
Chapter 3: VLANs	Chapter 9: Access Control Lists
Chapter 4: Routing Concepts	Chapter 10: DHCP
Chapter 5: Inter-VLAN Routing	Chapter 11: Network Address Translation for IPv4

Upon successful course completion participants will receive a Cisco Course Certificate

IST 202 - EVALUATION AND GRADING INFORMATION

Grades will be **calculated** as follows:

Tests	20 percent
Assignments/Journals/Quizzes	20 percent
Labs	30 percent
Proctored Skills based Assessments	20 percent
Proctored Final Written Examination	10 percent

Final letter grades for the course will be issued as follows:

A = 90 - 100
B = 80 - 89
C = 70 - 79
D = 60 - 69
F = 0 - 59