

**Computer Technology Department  
Business and Technology Division  
Greenville Technical College**

**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 1:

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:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Phillip Cluley, Department Head, Computer Technology  
Phillip.Cluley@gvltec.edu

**Approved by:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Michelle Byrd  
Dean, Technology Division

*This syllabus will remain in effect until revised or reviewed no later than August 2018.*

**Computer Technology Department  
Business and Technology Division  
Greenville Technical College**

**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, RIPv2, 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 v6 Labs & Study Guide*, Edition: 1<sup>st</sup>, Cisco Networking Academy, Allan Johnson, Copyright 2017, ISBN# 978-1-58713-426-5
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 unit tests, online skills assessments, and online labs.

*Revised August 2017*

## COLLEGE-WIDE GENERAL EDUCATION OUTCOMES

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*

## IST 202 – MAIN TOPICS

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](http://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.

- Course Introduction
- Router Configuration
- Router Concepts
- VLSM
- Route Summarization
- Dynamic Routing
- Switched Networks
- Switch Configuration
- SSH Configuration
- Switchport Security
- VLANS
- Inter-VLAN routing
- Standard Access Control Lists
- Extended Access Control Lists
- DHCP
- Network Address Translation for IPv4
- Device Discovery
- IOS Management

*Revised August 2017*

Upon successful course completion participants will receive a Cisco Course Certificate

## IST 202 - EVALUATION AND GRADING INFORMATION

Grades will be **calculated** as follows:

Unit Tests	10 percent
Assignments (including netacad.com chapter exams), Journals, and Quizzes	20 percent
Labs	40 percent
Proctored Skills Based Assessments	20 percent
Proctored Final Written Examination	10 percent

**Final letter grades** for the course will be issued as follows  
(rounded up)

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

*Revised August 2017*

## **Disabilities Information**

Students with disabilities, including those who were served in Special Education (resource or tutorial), should contact Student Disability Services (SDS) to discuss their need for services and accommodations. The main SDS office is located on the Barton Campus in the Student Center Building 105, office 113.

Staff can be reached by phone at 864 250-8202 or via email to [DisabilityServices@gvltec.edu](mailto:DisabilityServices@gvltec.edu) . Appointments are available at all satellite campus locations. Please check the GTC website for more information concerning Student Disability Services:

<http://gvltec.edu/disability-services/>

Efforts have been made to ensure all materials presented in an electronic format are accessible for students with disabilities and the college is committed to this obligation. However, if you experience any difficulty accessing these materials please notify your instructor immediately so a solution can be provided. You may also contact Student Disability Services directly at 864-250-8202 or by email at [DisabilityServices@gvltec.edu](mailto:DisabilityServices@gvltec.edu).

Students who need a PDF reader for accessibility of course documents presented in PDF format may download a free reader at <https://acrobat.adobe.com/us/en/products/pdf-reader.html>

## **Starfish**

We care about your success! Greenville Technical College is proud to offer Starfish, a software tool designed to promote student success through coordination and communication between students, instructors and support staff.

When you set up your profile in Starfish, you can connect with services, faculty and staff at Greenville Technical College. The link to Starfish is located in Blackboard. Throughout the term, you may receive emails regarding your attendance, course grades or academic performance.

To benefit from this software, it is important that you check your Greenville Technical College Gmail regularly and read the Starfish alerts. If your academic performance begins to drop, you may also be contacted directly by a Success Coach or the Student Success Center.

**Start, Stay, Succeed!**

*Revised August 2017*