



**TENTATIVE—SUBJECT TO CHANGE**

**CIST2452 Switching, Routing, and Wireless Essentials**

**COURSE SYLLABUS**

**Hybrid**

**Spring Semester 2021 (202114)**

**COURSE INFORMATION**

Credit Hours/Minutes: **4/4500**

Class Location: **Georgia Virtual Technical Connection (GVTC)/Cisco NetSpace**

Lab Location: **Room 815 Medical Technology Building**

Class Meets: **Via Internet for 15 weeks (40% online)**

Lab Meets: **Tuesdays, 2:00 – 4:10 PM or 5:00 - 7:10 PM (60% in class)**

Course Reference Number (CRN): **40063**

Preferred Method of Contact: **STC Email [John Taylor \(jtaylor@southeasterntech.edu\)](mailto:jtaylor@southeasterntech.edu)**

**INSTRUCTOR CONTACT INFORMATION**

Instructor Name: **Mr. John Taylor**

Email Address: **[John Taylor \(jtaylor@southeasterntech.edu\)](mailto:jtaylor@southeasterntech.edu)**

Campus/Office Location: **Vidalia Campus, Room 810 Gillis Building**

Office Hours: **2:00 PM – 5:00 PM Monday, Wednesday, and Thursday**

Phone: **(912) 538-3116**

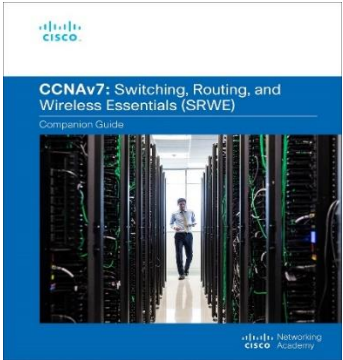
Fax Number: **(912) 538-3106**

Tutoring Hours: **Made by appointment with instructor**

**SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND HANDBOOK**

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and Handbook \(http://www.southeasterntech.edu/student-affairs/catalog-handbook.php\)](http://www.southeasterntech.edu/student-affairs/catalog-handbook.php).

## OPTIONAL TEXT

Book Image	Book Information
	<p><b>Switching, Routing, and Wireless Essentials, Companion Guide (CCNAv7)</b></p> <p>ISBN-13: 978-0—13-672935-8</p> <p>Cisco Network Academy ©2021 • Cisco Press • hardback</p> <p><b>You can purchase new or used from any online source but this text is not required.</b></p>

## REQUIRED SUPPLIES & SOFTWARE

Must have computer with Internet Access

**Students should not share login credentials with others and should change passwords periodically to maintain security.**

## COURSE DESCRIPTION

This course focuses on switching technologies and router operations that support small-to-medium business networks and includes wireless local area networks (WLANs) and security concepts. Students learn key switching and routing concepts. They can perform basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN.

## MAJOR COURSE COMPETENCIES/OUTLINE

Basic Device Configuration, Switching Concepts, VLANs, Inter-VLAN Routing, STP, EtherChannel, DHCPv4, SLAAC and DHCPv6 Concepts, FHRP Concepts, LAN Security Concepts, Basic Security Configuration, WLAN Concepts, WLAN Configuration, Routing Concepts, IP Static Routing, Troubleshoot Static and Default Routes.

## PREREQUISITE(S)

CIST 2451

## COURSE OUTLINE

### Course Outline

#### 1. Network and Computer Attacks

Order	Description
1	Configure devices by using security best practices.
2	Configure Initial settings on a Cisco switch.
3	Configure switch ports to meet network requirements.
4	Configure secure management access on a switch.
5	Configure basic settings on a router, using CLI, to route between two directly connected networks.
6	Verify connectivity between two networks that are directly connected to a router.

## Course Outline

### 2. Switching Concepts

Order	Description
1	Explain how Layer 2 switches forward data.
2	Explain how frames are forwarded in a switched network.
3	Compare a collision to a broadcast domain.

### 3. VLANs

Order	Description
1	Implement VLANs and trunking in a switched network.
2	Explain the purpose of VLANs in a switched network.
3	Explain how a switch forwards frames based on VLAN configuration in a multi-switch environment.
4	Configure a switch port to be assigned to a VLAN based on requirements.
5	Configure a trunk port on a LAN switch.
6	Configure Dynamic Trunking Protocol (DTP).

### 4. Inter-VLAN Routing

Order	Description
1	Troubleshoot Inter-VLAN routing on Layer 3 devices.
2	Describe options for configuring Inter-VLAN routing.
3	Configure router-on-a-stick Inter-VLAN routing.
4	Configure Inter-VLAN routing using Layer 3 switching.
5	Troubleshoot common Inter-VLAN configuration issues.

### 5. STP

Order	Description
1	Explain how STP enables redundancy in a Layer 2 network.
2	Explain common problems in a redundant, L2 switched network.
3	Explain how STP operates in a simple, switched network.
4	Explain how Rapid PVST+ operates.

### 6. EtherChannel

Order	Description
1	Describe EtherChannel technology.
2	Configure EtherChannel.
3	Troubleshoot EtherChannel.

### 7. DHCPv4

Order	Description
1	Explain how DHCPv4 operates across multiple LANs.
2	Configure a router as a DHCPv4 server.
3	Configure a router as a DHCPv4 client.
4	Implement DHCPv4 to operate across multiple LANs.

### 8. SLAAC and DHCPv6 Concepts

## Course Outline

Order	Description
1	Configure dynamic address allocation in IPv6 networks.
2	Explain how an IPv6 host can acquire its IPv6 configuration.
3	Explain the operation of DHCPv6.
4	Configure a stateful and stateless DHCPv6 server.

### 9. FHRP Concepts

Order	Description
1	Explain how FHRPs provide default gateway services in a redundant network.
2	Explain the purpose and operation of first hop redundancy protocols.
3	Explain how HSRP operates.

### 10. LAN Security Concepts

Order	Description
1	Explain how vulnerabilities compromise LAN security.
2	Explain how to use endpoint security to mitigate attacks.
3	Explain how AAA and 802.1x are used to authenticate LAN endpoints and devices.
4	Identify Layer 2 vulnerabilities.
5	Explain how a MAC address table attack compromises LAN security.
6	Explain how LAN attacks compromise LAN security.

### 11. Switch Security Configuration

Order	Description
1	Implement port security to mitigate MAC address table attacks.
2	Explain how to configure DTP and native VLAN to mitigate VLAN attacks.
3	Explain how to configure DHCP snooping to mitigate DHCP attacks.
4	Explain how to configure ARP inspection to mitigate ARP attacks.
5	Explain how to configure Portfast and BPDU Guard to mitigate STP attacks.

### 12. WLAN Concepts

Order	Description
1	Explain how WLANs enable network connectivity.
2	Describe WLAN technology and standards.
3	Describe the components of a WLAN infrastructure.
4	Explain how wireless technology enables WLAN operation.
5	Explain how a WLC uses CAPWAP to manage multiple APs.
6	Describe channel management in a WLAN.
7	Describe threats to WLANs.
8	Describe WLAN security mechanisms.

## Course Outline

### 13. WLAN Configuration

Order	Description
1	Implement a WLAN using a wireless router and WLC.
2	Configure a WLAN to support a remote site.
3	Configure a WLC WLAN to use the management interface and WPA2 PSK authentication.
4	Configure a WLC WLAN to use a VLAN interface, a DHCP server, and WPA2 Enterprises authentication.

### 14. Routing Concepts

Order	Description
1	Explain how routers use information in packets to make forwarding decisions.
2	Explain how routers determine the best path.
3	Explain how routers forward packets to the destination.
4	Configure basic settings on a Cisco IOS router.
5	Describe the structure of a routing table.
6	Compare static and dynamic concepts.

### 15. IP Static Routing

Order	Description
1	Configure IPv4 and IPv6 static routes.
2	Describe the command syntax for static routes.
3	Configure IPv4 and IPv6 static routes.
4	Configure IPv4 and IPv6 default static routes.
5	Configure a floating static route to provide a backup connection.
6	Configure IPv4 and IPv6 static host routes that direct traffic to a specific host.

### 16. Troubleshoot Static and Default Routes

Order	Description
1	Troubleshoot static and default route configurations.
2	Explain how a router processes packets when a static route is configured.
3	Troubleshoot common static and default route configuration issues.

## GENERAL EDUCATION CORE COMPETENCIES

Southeastern Technical College has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

## STUDENT REQUIREMENTS (HYBRID)

Students are expected to complete all work shown on the attached lesson plan. Students are also expected to complete all assessments and exams on Cisco NetSpace by the due dates specified on the lesson plan. Packet

Tracer assignments will be submitted through Cisco NetSpace and all Labs assignments will be completed in person in Lab 815 on dates specified by Lesson Plan. Students are given numerous days to complete assignments; therefore, **late assignments may not be accepted. Any late work accepted will incur a minimum 15 point deduction.**

Exceptions to the due dates of assignments due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor. Students are responsible for policies and procedures included in the Southeastern Technical College (STC) *Catalog and Handbook*.

**Program students must earn a minimum grade of C in this course. Unannounced quizzes/assignments may be given. Late assignments will not be accepted. Students who miss any assignment, quiz, test, project, or discussion board will receive a grade of 0.**

Students are expected to prove weekly academic engagement by meeting assignment deadlines each week and spending enough time during the semester doing the required homework, quizzes, and tests. Students are expected to communicate frequently through college email and discussion boards. College email is accessed at <https://portal.office.com>, under Quick links on our webpage, or in the menu of your Blackboard course.

### **DISCUSSION BOARD TOPICS**

Discussions must be appropriate to the class. Spelling and Grammar are considered part of the grade. Posted content should fully answer the question. Short 1 to 2 sentence posts will not be sufficient. See Discussion Board rubric below. **Be sure to complete your initial post by Monday of the following week and all replies by the Wednesday due date. Both post and peer replies are required for full credit. See Discussion Topic Grading Rubric for more details.**

### **EMAILS**

Preferred method of communication should be through student MAIL. Make sure that you always type your name and class in the subject line of every email you send me so I know which class you are in. For example: **CIST2452 Taylor**

Students are expected to communicate frequently through college email and/or discussion boards. College email is accessed at <https://portal.office.com>, under Quick links on our webpage, or in the menu of our Blackboard course.

### **CHECKING GRADES**

A grade book is made available in the BLACKBOARD course on the main page by clicking the MY GRADES link when students log in. This grade book is for students to review and is continuously updated throughout the semester. Students can view their grades at any time to see the individual grades for each assignment. The overall percentage averages should display in the grade book to help track course progress.

### **NO HARM NO FOUL POLICY**

It is the student's responsibility to drop courses during the first three days by completing a withdrawal form with a Counselor in Student Affairs. If a student comes to class during the first three days or any day during this time, the student will be dropped with no penalty **only if** they have completed the Withdrawal Form with Student Affairs by the close of business on the third business day of the quarter. **The student must formally withdraw from classes in order to receive the no harm-no foul benefit.**

### **COVID-19 MASK REQUIREMENT**

Masks or face coverings must be worn at all times while on the campus of Southeastern Technical College. This measure is being implemented to reduce COVID-19 related health risks for everyone engaged in the

educational process. Masks or face coverings must be worn over the nose and mouth, in accordance with the Centers for Disease Control and Prevention (CDC). A student’s refusal to wear a mask or face covering will be considered a classroom disruption and the student may be asked to leave campus and/or receive further discipline.

**COVID-19 SIGNS AND SYMPTOMS**

We encourage individuals to monitor for the signs and symptoms of COVID-19 prior to coming on campus.

If you have experienced the symptoms listed below or have a body temperature 100.4°F or higher, we encourage you to self-quarantine at home and contact a primary care physician’s office, local urgent care facility, or health department for further direction. Please notify your instructor(s) by email and do not come on campus for any reason.

<b>COVID-19 Key Symptoms</b>
Fever or felt feverish
Cough: new or worsening, not attributed to another health condition
Shortness of breath, not attributed to another health condition
New loss of taste or smell
Chills; Repeated shaking with chills
Sore throat, not attributed to another health condition
Muscle pain, not attributed to another health condition or exercise
Headache, not attributed to another health condition
Diarrhea (unless due to known cause)
<b>In the past 14 days, if you:</b>
Have had close contact with or are caring for an individual diagnosed with COVID-19 at home (not in healthcare setting), please do not come on campus and contact your instructor (s).

**COVID-19 SELF-REPORTING REQUIREMENT**

Students taking classes on campus, who test positive for COVID-19 or who have been exposed to a COVID-19 positive person, are required to self-report using the [COVID 19 Health Reporting Form](#). Report all positive cases of COVID-19 to your instructor and [Stephannie Waters](#), Exposure Control Coordinator, [swaters@southeasterntech.edu](mailto:swaters@southeasterntech.edu), 912-538-3195.

**HYBRID ATTENDANCE GUIDELINES**

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may receive a grade of “F” (Failing 0-59) and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. The completion dates of these activities will be used to determine a student's last date of attendance in the event a student withdraws, stops attending, or receives an "F" in a course.

### **STUDENTS WITH DISABILITIES**

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

**Swainsboro Campus:** Macy Gay [mgay@southeasterntech.edu](mailto:mgay@southeasterntech.edu), 478-289-2274, Building 1, Room 1210

**Vidalia Campus:** Helen Thomas [hthomas@southeasterntech.edu](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

### **SPECIFIC ABSENCES**

Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

### **PREGNANCY**

Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please make arrangements with the appropriate campus coordinator.

**Swainsboro Campus:** Macy Gay [mgay@southeasterntech.edu](mailto:mgay@southeasterntech.edu), 478-289-2274, Building 1, Room 1210

**Vidalia Campus:** Helen Thomas [hthomas@southeasterntech.edu](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before the absence occurs. Requests made after delivery **MAY NOT** be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

### **EXIT EXAM**

All IT Professional diploma and degree students are required to pass the Capstone Exam of CIST2452 at the end of the semester. Students must score 70% or better on the Capstone Exam to successfully complete the course. Students scoring below 70 will be required to retake CIST2452.

### **WITHDRAWAL PROCEDURE**

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" (Withdrawn) is assigned for the course(s) when the student completes the withdrawal form.

Important – Student-initiated withdrawals are not allowed after the 65% point. After the 65% point of the term in which student is enrolled, the student has earned the right to a letter grade and will receive a grade for the course. Please note: Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of "F" (Failing 0-59) being assigned.



Informing your instructor that you will not return to his/her course, does not satisfy the approved withdrawal procedure outlined above.

There is no refund for partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. A grade of "W" will count in attempted hour calculations for the purpose of Financial Aid.

### **PROCTORED EVENT REQUIREMENT**

In order to validate student identity for all online courses, students enrolled in online courses are **required** to complete one proctored event per online course. The proctored event will be administered on separate days—once on the Vidalia campus and once on the Swainsboro campus. Students must attend one of the proctored sessions as scheduled on the Lesson Plan/Course Calendar. The event will be monitored by the instructor or by an approved proctor. The proctored event may be a major exam, assignment, or presentation, etc. that will count a minimum of 20% of the course grade. Students must attend one of the scheduled proctored sessions and will need to make arrangements with work, childcare, etc. The specific dates of the proctored event are scheduled on the Lesson Plan/Calendar for the online course.

Students living farther than 75 miles from either campus who cannot come to Southeastern Tech for the event must secure an approved proctoring site. The site and the proctor must meet Southeastern Technical College's requirements (instructor will provide more information and necessary forms if this is the case).

Note: Students taking proctored events off campus will utilize the Proctor Scheduling and Approval Form found in Blackboard within the Getting Started/Start Here and Proctoring Event area. The completed form should be submitted to the course instructor a minimum of two weeks prior to the proctored event. If approved, the instructor will notify the proctor.

Students arranging off-campus proctoring must take the event on one of the-originally scheduled days. Students who do not complete the proctored event as scheduled must submit a valid documented excuse within three business days after the scheduled event. If the excuse is approved by the instructor of the course, students must make arrangements with the instructor to makeup/reschedule the missed event. The penalty and makeup instructions will be at the instructor's discretion. Proctored events will be given after the 65% point of the semester.

**Students who do not complete the proctored event on the scheduled date and do not present a valid documented excuse within three business days of the scheduled event will be withdrawn from the course with a "WF" (Withdrawn Failing). If the proctored event is scheduled during final exams, any student who misses the proctored event will be issued an "F" (Failing) for the course.**

### **PROCTORING FEES**

Students are not charged a proctoring fee when taking a proctored event at Southeastern Technical College or any other TCSG college. Students who choose to use an off-campus proctor may be assessed a proctoring fee by the proctoring site. In this instance, the student is responsible for payment.

The required proctored event for this class is scheduled on the following dates and times:

**Vidalia, April 27, 2:00 PM Gillis Building Room 812 or Swainsboro, April 29, 2:00 PM Building 2 Room 2106**

### **MAKEUP GUIDELINES (TESTS, QUIZZES, HOMEWORK, PROJECTS, ETC.)**

Students are required to take all tests scheduled during the semester. Failure to take Tests/Exam(s), and assignments will result in a grade of zero. There will be no makeup of assignments or EXAMS. If Internet or browser failure occurs, contact instructor immediately. A decision will be made at that time if the assignment/exam will be reset. Instructor reserves the right to deduct points from the scores for exceeding the scheduled time limit on the assignment/exam. Note: If student notifies instructor about problems because of technical issues after the due date or on the last day of the semester, the student will NOT be allowed to make-up the assignment. No exceptions! Assignments must be turned in on the assigned date and will not be accepted late, a grade of zero will be given. All Assignments are due according to the lesson plan. The due dates are posted on the lesson plan. Weeks start on Monday and end on Sunday with **assignments due on Wednesday at 11.59 PM** of the following week. See Lesson Plan. Makeups are not allowed for unannounced quizzes/assignments.

### **ACADEMIC DISHONESTY POLICY**

The Southeastern Technical College Academic Dishonesty Policy states that all forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the Southeastern Technical College Catalog and Handbook.

### **PROCEDURE FOR ACADEMIC MISCONDUCT**

The procedure for dealing with academic misconduct and dishonesty is as follows:

#### **1. First Offense**

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

#### **2. Second Offense**

Student is given a grade of "WF" (Withdrawn Failing) for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

#### **3. Third Offense**

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

### **STATEMENT OF NON-DISCRIMINATION**

The Technical College System of Georgia (TCSG) and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member, or citizenship status (except in those special circumstances permitted or mandated by law). This nondiscrimination policy encompasses the operation of all technical college-administered programs, federally

financed programs, educational programs and activities involving admissions, scholarships and loans, student life, and athletics. It also applies to the recruitment and employment of personnel and contracting for goods and services.

All work and campus environments shall be free from unlawful forms of discrimination, harassment and retaliation as outlined under Title IX of the Educational Amendments of 1972, Title VI and Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, Executive Order 11246, as amended, the Vietnam Era Veterans Readjustment Act of 1974, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990, as amended, the Equal Pay Act, Lilly Ledbetter Fair Pay Act of 2009, the Georgia Fair Employment Act of 1978, as amended, the Immigration Reform and Control Act of 1986, the Genetic Information Nondiscrimination Act of 2008, the Workforce Investment Act of 1998 and other related mandates under TCSG Policy, federal or state statutes.

The Technical College System and Technical Colleges shall promote the realization of equal opportunity through a positive continuing program of specific practices designed to ensure the full realization of equal opportunity.

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

<p><b>American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer</b></p>	<p><b>Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer</b></p>
<p>Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1<sup>st</sup> Street, Vidalia Office 165 Phone: 912-538-3126 Email: <a href="mailto:hthomas@southeasterntech.edu">Helen Thomas (hthomas@southeasterntech.edu)</a></p>	<p>Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1<sup>st</sup> Street, Vidalia Office 138B Phone: 912-538-3230 Email: <a href="mailto:ljonas@southeasterntech.edu">Lanie Jonas (ljonas@southeasterntech.edu)</a></p>

**ACCESSIBILITY STATEMENT**

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

**GRIEVANCE PROCEDURES**

Grievance procedures can be found in the Catalog and Handbook located on Southeastern Technical College’s website.

**ACCESS TO TECHNOLOGY**

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College \(STC\) Website \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

**TECHNICAL COLLEGE SYSTEM OF GEORGIA (TCSG) GUARANTEE/WARRANTY STATEMENT**

*The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.*

## GRADING POLICY

Assessment/Assignment	Percentage
Packet Tracer Activities	10%
Lab Activities	10%
Module Exams	20%
PT Practice Skills Exam	5%
Capstone (Part 1 of Hands-on Skills Exam)	20%
Hands-on Skills Exam	15%
Comprehensive Final	15%
Discussion Board	5%

## GRADING SCALE

Letter Grade	Range
A	90-100
B	80-89
C	70-79
*D	60-69
*F	0-59

\*Grade of D or below results in student repeating the class

## Discussion Board Grading Rubrics:

# of discussion posts	# of discussion replies	Grade	Due Date, Length, Grammar and Spelling Requirements
1	1	100	Students who post their initial discussion board response to the discussion board topic and reply to at least one other student's post will be given a 100 on the assignment <u>if</u> the post is turned in by the due date, contain 4-5 sentences and free of grammatical and spelling errors. The student will receive a two point deduction for each grammatical and spelling error in both their response and reply. A 10 point deduction will be given for any response or reply that is not 4-5 sentences in length. No credit will be given for any response or reply that is simply an answer of "yes/no" or "I agree/disagree." Replying to your own post is NOT considered a reply.
1	0	70	Any student that does not respond to at least one other student's post will not receive a grade above 70. The grade of 70 will be the highest grade that the student will be able to receive on the discussion post if the post is turned in by the due date, contain 4-5 sentences and free of grammatical errors and spelling errors. The student will receive a one point deduction for each grammatical and spelling error in their response. A 10 point deduction will be given for any response that is not 4-5 sentences in length. No credit will be given for any response or reply that is simply an answer of "yes/no" or "I agree/disagree." Replying to your own post is NOT considered a reply.
0	1	50	Students who only respond to one other student's post will not receive a grade above 50. The grade of 50 will be the highest grade that the student will be able to receive on the discussion response if the response is turned in by the due date, contain 4-5 sentences and free of grammatical errors and spelling errors. The student will receive a one point deduction for each grammatical and spelling error in their reply. A 10 point deduction will be given for any reply that is not 4-5 sentences in length. No credit will be given for any response or reply that is simply an answer of "yes/no" or "I agree/disagree." Replying to your own post is NOT considered a reply.
0	0	0	Students will receive a 0 on the discussion topic if the student does not post an answer or response to one other students' post by the due date. No credit will be given for any response or reply that is simply an answer of "yes/no" or "I agree/disagree." Replying to your own post is NOT considered a reply.

### DISCLAIMER STATEMENT

**Instructor reserves the right to change the syllabus and/or lesson plan as necessary. The official copy of the syllabus is located inside the student's online course shell. The syllabus displayed in advance of the semester in a location other than the course you are enrolled in is for planning purposes only.**

# CIST 2452 Routing and Switching Essentials

## LESSON PLAN

### Spring Semester 2021 (FY202114)

The curriculum can and should be accessed thru the Cisco NetSpace CMS. You can purchase the optional text if you desire a hard copy. The online curriculum includes all interactive learning activities and provides an additional way to help your learn the course material. You will complete your chapter quizzes, exams and comprehensive final using the Cisco Network Academy NetSpace website. You should have received an email stating your addition/registration for this course. Once you get logged in, I encourage you to download and install the latest version of Packet Tracer software (if you don't already have it installed). This is an excellent program that you will need to complete assignments as well as learn the concepts covered in this course. Contact your instructor if you have any questions.

**Key:** Jan = January, Feb = February, Mar=March, Apr=April

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
<b>Week 1</b> Jan 11 - 17	<b>1</b>	<b>Basic Device Configuration</b>	Complete <u>Pledge, Student Introduction and Syllabus Quiz</u> on Blackboard. <b>These 3 tasks must be completed no later than January 13, 2021 to remain in this class.</b> Verify Cisco NetSpace login. Verify latest version of Packet Tracer installed. Read and work through Module 1. <b>Complete and submit <u>Packet Tracer Activities: 1.3.6, 1.4.7, 1.5.10 and 1.6.1.</u></b> Complete <u>Discussion Topic 1.</u>	1 a,c
<b>Jan 12</b> <b>Lab</b>			<b>Complete <u>Labs: 1.1.7 and 1.6.2 in Networking Lab.</u></b>	1 a,c

**\*Week 1 assignments must be completed and turned in before midnight January 20.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 2 Jan 19 - 24	2 3	Switching Concepts VLANs	Read and work through Module 2. Read and work through Module 3.  <b>Complete and submit <u>Packet Tracer Activities</u>: 3.3.12, 3.4.5, 3.5.5 and 3.6.1.</b>	2,3 a,c
Jan 19 Lab			<b>Complete <u>Labs</u>: 3.4.6 and 3.6.2 in Networking Lab.</b>	3 a,c

**\*Week 2 assignments must be completed and turned in before midnight January 27.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 3 Jan 25 - 31	4	Inter-VLAN Routing	Read and work through Module 3.  <b>Complete and submit <u>Packet Tracer Activities</u>: 4.2.7, 4.3.8 and 4.5.1.</b>  Complete <u>Discussion Topic</u> 2.	3,4 a,c
Jan 26 Lab			<b>Complete <u>Labs</u>: 4.2.8, 4.4.9 and 4.5.2 in Networking Lab.</b>	3,4 a,c

**\*Week 3 assignments must be completed and turned in before midnight February 3.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 4 Feb 1 - 7		Catchup	*Complete any missing work from Modules 1-4.  Take <b><u>Modules 1-4: Switching Concepts, VLANs, and Inter-VLAN Routing Exam</u></b> .  *Points will be deducted from assignment grade for all late submissions.	1,2,3,4 a,c

**\*Week 4 assignments must be completed and turned in before midnight February 12.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 5 Feb 8 - 14	5 6	STP EtherChannel	Read and work through Module 5. Read and work through Module 6. <b>Complete and submit <u>Packet Tracer Activities</u>: 6.2.4, 6.3.4 and 6.4.1.</b> Complete <u>Discussion Topic</u> 3.	2,5,6 a,c
Feb 9 Lab			<b>Complete <u>Labs</u>: 6.4.2 in Networking Lab.</b>	2,6 a,c

**\*Week 5 assignments must be completed and turned in before midnight February 12.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 6 Feb 15 - 21		Catchup	*Complete any missing work from Modules 5-6. Take <b><u>Modules 5-6: Redundant Networks Exam</u></b> . *Points will be deducted from assignment grade for all late submissions.	2,5,6 a,c

**\*Week 6 assignments must be completed and turned in before midnight February 19.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 7 Feb 22 - 28	7 8	DHCPv4 SLAAC and DHCPv6	Read and work through Module 7. <b>Complete and submit <u>Packet Tracer Activities</u>: 7.2.10 and 7.4.1.</b>	7,8 a,c

**\*Week 7 assignments must be completed and turned in before midnight March 10.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 8 Mar 1 - 7	9	FHRP Concepts	Read and work through Module 9. <b>Complete and submit <u>Packet Tracer Activities</u>: 9.3.3.</b> Complete <u>Discussion Topic</u> 4.	9 a,c
Mar 2 Lab			<b>Complete <u>Labs</u>: 7.4.2 and 8.5.1 in Networking Lab.</b>	7,8 a,c

**\*Week 8 assignments must be completed and turned in before midnight March 10.**



Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
<b>Week 9</b> <b>Mar 8 -14</b>		<b>Catchup</b>	*Complete any missing work from Modules 7-9.  Take <b><u>Modules 7-9: Available and Reliable Networks Exam</u></b> .  *Points will be deducted from assignment grade for all late submissions.	7,8,9 a,c

**\*Week 9 assignments must be completed and turned in before midnight March 17.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
<b>Week 10</b> <b>Mar 15 - 21</b>	<b>10</b> <b>11</b>	<b>LAN Security Concepts</b> <b>Switch Security Configuration</b>	Read and work through Module 10. Read and work through Module 11. <b>Complete and submit <u>Packet Tracer Activities: 11.1.10 and 11.6.1</u></b> .	10,11 a,c
<b>Mar 16</b> <b>Lab</b>			<b>Complete <u>Labs: 11.6.2</u> in <u>Networking Lab</u>.</b>	11 a,c

**\*Week 10 assignments must be completed and turned in before midnight March 31.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
<b>Week 11</b> <b>Mar 22 - 28</b>	<b>12</b> <b>13</b>	<b>WLAN Concepts</b> <b>WLAN Configuration</b>	Read and work through Module 12. Read and work through Module 13. <b>Complete and submit <u>Packet Tracer Activities: 13.1.10, 13.3.12 and 13.5.1</u></b> . Complete <b><u>Discussion Topic 5</u></b> .	12,13 a,c
<b>Mar 23</b> <b>Lab</b>			<b>Complete <u>Labs: 13.1.11</u> in <u>Networking Lab</u>.</b>	13 a,c

**\*Week 11 assignments must be completed and turned in before midnight March 31.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 12 Mar 29 – Apr 4		Catchup	*Complete any missing work from Modules 10-13.  Take <b><u>Modules 10-13: L2 Security and WLANs Exam.</u></b>  *Points will be deducted from assignment grade for all late submissions.	10,11,12,13 a,c

**\*Week 12 assignments must be completed and turned in before midnight April 7.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 13 Apr 7 - 11	14	Routing Concepts  <b>Schedule Hands-on Final</b>	Read and work through Module 14. <b>Complete and submit <u>Packet Tracer Activities: 14.3.5.</u></b>  <b>IMPORTANT: See Instructor to schedule Hands-on Final time slot and receive printed exam.</b>	14 a,c

**\*Week 13 assignments must be completed and turned in before midnight April 29.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 14 Apr 12 - 18	15 16	IP Static Routing Troubleshoot Static and Default Routes	Read and work through Module 15. Read and work through Module 16. <b>Complete and submit <u>Packet Tracer Activities: 15.6.1 and 16.3.1.</u></b>  Take <b><u>Modules 14-16: Routing Concepts and Configuration Exam.</u></b>	14,15,16 a,c
Apr 13 Lab			<b>Complete <u>Labs: 15.6.2 and 16.3.2</u> in Networking Lab.</b>	14,15,16 a,c

**\*Week 14 assignments must be completed and turned in before midnight April 29.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 15 Apr 19 -25		<b>Hands-on Finals this week</b> (Must be completed on campus in Networking Lab during students scheduled time slot)	Complete <b>SRWE Practice PT Skills Assessment (PTSA) – Part 2 Exam.</b> Complete <b>Hands-on Final</b> in lab during scheduled time slot.	1-16 a,c

**\*Week 15 assignments must be completed and turned in before midnight April 29.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 16 Apr 26 – 29		<b>REQUIRED: Proctored Final Exam (covers all chapters)</b>  <b>Course Feedback must be completed/marked completed before taking the Final Exam.</b>	Complete any missing work from Modules 14-16. Practice Final Exam available to review for Final Exam. <b>Complete Course feedback assessment and Proctored Comprehensive Final Exam.</b>	1-16 a,c
Apr 27, 29			<b>Proctored Final Exam (covers all chapters)</b>  <b>Vidalia, April 27, 2:00 PM Gillis Building Room 812</b> or <b>Swainsboro, April 29, 2:00 PM Building 2 Room 2106</b>	

**\*Week 16 assignments must be completed and turned in before midnight April 29.**

**COMPETENCY AREAS:**

- |                               |  |
|-------------------------------|--|
| 1. Basic Device Configuration | 9. FHRP Concepts                           |
| 2. Switching Concepts         | 10. LAN Security Concepts                  |
| 3. VLANs                      | 11. Switch Security Configuration          |
| 4. Inter-VLAN Routing         | 12. WLAN Concepts                          |
| 5. STP                        | 13. WLAN Configuration                     |
| 6. EtherChannel               | 14. Routing Concepts                       |
| 7. DHCPv4                     | 15. IP Static Routing                      |
| 8. SLAAC and DHCPv6           | 16. Troubleshoot Static and Default Routes |

**GENERAL CORE EDUCATIONAL COMPETENCIES:**

- a) The ability to utilize standard written English.
- b) The ability to solve practical mathematical problems.
- c) The ability to read, analyze, and interpret information.

**Students are responsible for all information contained in this lesson plan. This lesson plan is subject to change at instructor's discretion.**