



**TENTATIVE—SUBJECT TO CHANGE**  
**CIST2451 Introduction to Networks**  
**HYBRID COURSE SYLLABUS**  
**Fall Semester 2021 (202212)**

**COURSE INFORMATION**

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

Class Location: **Vidalia Campus, Gillis Building, Room 815**

Class Meets: **40% Hybrid / 60% F2F Tuesdays 2:00 – 5:20 PM 15 weeks**

CRN: **20109**

Preferred Method of Contact: **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 Medical Technology Building**

Office Hours: **8:00 – 12:00 Monday and Thursday**

Phone: **912-538-3116**

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

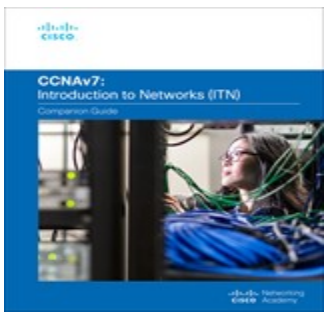
Tutoring Hours: **Made by appointment with instructor**

**This course is taught in a hybrid format. Hybrid classes require students to complete a portion of the required contact hours traditionally by attending classes on campus while completing the remaining portion online at the student’s convenience with respect to the instructor’s requirements.**

**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](https://catalog.southeasterntech.edu/college-catalog/downloads/current.pdf) (<https://catalog.southeasterntech.edu/college-catalog/downloads/current.pdf>).

**OPTIONAL TEXT**

Book Image	Book Information
	<p><b>Introduction to Networks Companion Guide (CCNAv7)</b></p> <p><b>ISBN-13: 978-0-13-663366-2</b> <b>ISBN-10: 0-13-663366-8</b></p> <p>©2020 • Cisco Press • Paper, 736 pp</p> <p><b>You will need to order book from online source.</b></p>

**Students are required to have all books, codes, and supplies on the first day of class.**

## **REQUIRED SUPPLIES & SOFTWARE**

Internet Access is required.

Microsoft Word is required.

Note: Although students can use their smart phones and tablets to access their online course(s), exams, discussions, assignments, and other graded activities should be performed on a personal computer. Neither Blackboard nor Georgia Virtual Technical Connection (GVTC) provide technical support for issues relating to the use of a smart phone or tablet so students are advised to not rely on these devices to take an online course.

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

## **COURSE DESCRIPTION**

This course introduces the architectures, models, protocols, and networking elements that connect users, devices, applications and data through the internet and across modern computer networks - including IP addressing and Ethernet fundamentals. By the end of the course, students can build simple local area networks (LANs) that integrate IP addressing schemes, foundational network security, and perform basic configurations for routers and switches.

## **MAJOR COURSE COMPETENCIES**

Configure switches and end devices to provide access to local and remote network resources.

Explain how physical and data link layer protocols support the operation of Ethernet in a switched network.

Configure routers to enable end-to-end connectivity between remote devices.

Create IPv4 and IPv6 addressing schemes and verify network connectivity between devices.

Explain how the upper layers of the OSI model support network applications.

Configure a small network with security best practices.

Troubleshoot connectivity in a small network.

## **PREREQUISITE(S)**

Program Admission

## **COURSE OUTLINE**

### **Course Outline**

#### **1. Networking Today**

Order	Description
1	Explain the advances in modern network technologies.
2	Explain how networks affect our daily lives.
3	Explain how host and network devices are used.
4	Explain network representations and how they are used in network topologies
5	Compare the characteristics of common types of networks.
6	Explain how LANs and WANs interconnect to the internet

## Course Outline

- 7 Describe the four basic requirements of a reliable network.
- 9 Explain how trends such as BYOD, online collaboration, video, and cloud computing are changing the way we interact.
- 10 Identify some basic security threats and solutions for all networks.
- 11 Explain employment opportunities in the networking field.

### 2. Basic Switch and End Device Configuration

Order	Description
1	Implement initial settings including passwords, IP addressing, and default gateway parameters on a network switch and end devices.
2	Explain how to access a Cisco IOS device for configuration purposes.
4	Explain how to navigate Cisco IOS to configure network devices.
5	Describe the command structure of Cisco IOS software.
6	Configure a Cisco IOS device using CLI.
7	Use IOS commands to save the running configuration.
8	Explain how devices communicate across network media.
9	Configure a host device with an IP address.
10	Verify connectivity between two end devices.

### 3. Protocols and Models

Order	Description
1	Explain how network protocols enable devices to access local and remote network resources.
2	Describe the types of rules that are necessary to successfully communicate.
3	Explain why protocols are necessary in network communication.
4	Explain the purpose of adhering to a protocol suite.
5	Explain the role of standards organizations in establishing protocols for network interoperability.
6	Explain how the TCP/IP model and the OSI model are used to facilitate standardization in the communication process.
7	Explain how data encapsulation allows data to be transported across the network.
8	Explain how local hosts access local resources on a network.

### 4. Physical Layer

Order	Description
1	Explain how physical layer protocols, services, and network media support communications across data networks.
2	Describe the purpose and functions of the physical layer in the network.
3	Describe characteristics of the physical layer.
4	Identify the basic characteristics of copper cabling.
5	Explain how UTP cable is used in Ethernet networks.
6	Describe fiber-optic cabling and its main advantages over other media.
7	Connect devices using wired and wireless media.

### 5. Number Systems

## Course Outline

Order	Description
1	Calculate numbers between decimal, binary, and hexadecimal systems

### 6. Data Link Layer

Order	Description
1	Explain how media access control in the data link layer supports communication across networks.
2	Describe the purpose and function of the data link layer in preparing communication for transmission on specific media.
3	Compare the characteristics of media access control methods on WAN and LAN topologies.
4	Describe the characteristics and functions of the data link frame.

### 7. Ethernet Switching

Order	Description
1	Explain how Ethernet operates in a switched network.
2	Explain how the Ethernet sublayers are related to the frame fields.
3	Describe the Ethernet MAC address.
4	Explain how a switch builds its MAC address table and forwards frames.
5	Describe switch forwarding methods and port settings available on Layer 2 switch ports.

### 8. Network Layer

Order	Description
1	Explain how routers use network layer protocols and services to enable end-to-end connectivity.
2	Explain how the network layer uses IP protocols for reliable communications
3	Explain the role of the major header fields in the IPv4 packet.
4	Explain the role of the major header fields in the IPv6 packet.
5	Explain how network devices use routing tables to direct packets to a destination network.
6	Explain the function of fields in the routing table of a router.

### 9. Address Resolution

Order	Description
1	Explain how ARP and ND enable communication on a network.
2	Compare the roles of the MAC address and the IP address.
3	Describe the purpose of ARP.
4	Describe the operation of IPv6 neighbor discovery.

### 10. Basic Router Configuration

Order	Description
1	Configure initial settings on a Cisco IOS router.
2	Configure two active interfaces on a Cisco IOS router.
3	Configure devices to use the default gateway.

## Course Outline

### 11. IPv4 Addressing

Order	Description
1	Calculate an IPv4 subnetting scheme to efficiently segment a network.
2	Describe the structure of an IPv4 address including the network portion, the host portion, and the subnet mask.
3	Compare the characteristics and uses of the unicast, broadcast and multicast IPv4 addresses.
4	Explain public, private, and reserved IPv4 addresses.
5	Explain how subnetting segments a network to enable better communication.
6	Calculate IPv4 subnets for a /24 prefix.
7	Calculate IPv4 subnets for a /16 and /8 prefix.
8	Given a set of requirements for subnetting, implement an IPv4 addressing scheme.
9	Explain how to create a flexible addressing scheme using variable length subnet masking (VLSM).
10	Implement a VLSM addressing scheme.

### 12. IPv6 Addressing

Order	Description
1	Explain the need for IPv6 addressing.
2	Explain how IPv6 addresses are represented.
3	Compare types of IPv6 network addresses.
4	Explain how to configure static global unicast and linklocal IPv6 network addresses.
5	Explain how to configure global unicast addresses dynamically.
6	Configure link-local addresses dynamically.
7	Identify types IPv6 addresses.
8	Implement a subnetted IPv6 addressing scheme.

### 13. ICMP

Order	Description
1	Explain how ICMP is used to test network connectivity.
2	Use ping and traceroute utilities to test network connectivity.

### 14. Transport Layer

Order	Description
1	Compare the operations of transport layer protocols in supporting end-to-end communication.
2	Explain the purpose of the transport layer in managing the transportation of data in end-to-end communication.
3	Explain characteristics of the TCP.
5	Explain characteristics of the UDP.
6	Explain how TCP and UDP use port numbers.
7	Explain how TCP session establishment and termination processes facilitate reliable communication.
8	Explain how TCP protocol data units are transmitted and acknowledged to guarantee delivery.

## Course Outline

- 9 Describe the UDP client processes to establish communication with a server.

### 15. Application Layer

Order	Description
1	Explain the operation of application layer protocols in providing support to user applications
2	Explain how the functions of the application layer, session layer, and presentation layer work together to provide network services to end user applications.
3	Explain how end user applications operate in a peer-to-peer network.
4	Explain how web and email protocols operate.
5	Explain how DNS and DHCP operate.
6	Explain how file transfer protocols operate.

### 16. Network Security Fundamentals

Order	Description
1	Explain why basic security measures are necessary on network devices.
2	Identify security vulnerabilities.
3	Identify general mitigation techniques.
4	Configure network devices with device hardening features to mitigate security threats.

### 17. Build a Small Network

Order	Description
1	Identify the devices used in a small network.
2	Identify the protocols and applications used in a small network.
3	Explain how a small network serves as the basis of larger networks
4	Use the output of the ping and tracert commands to verify connectivity and establish relative network performance.
5	Use host and IOS commands to acquire information about the devices in a network.
6	Describe common network troubleshooting methodologies.
7	Troubleshoot issues with devices in the network.

## 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 required by the instructor. Students will have at least one week to complete tests and assignments. All tests and assignments are due at midnight on Wednesday of the following week.

**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.

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

Regardless of vaccination status, masks or face coverings must be worn at all times while in a classroom or lab 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
Chills
Shortness of breath or difficulty breathing (not attributed to any other health condition)
Cough: new or worsening, not attributed to another health condition
Fatigue
Muscle or body aches
Headache
New loss of taste or smell
Sore throat (not attributed to any other health condition)
Congestion or runny nose (not attributed to any other health condition)
Nausea or vomiting
Diarrhea
<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, regardless of vaccination status, who test positive for COVID-19 or who have been exposed to a COVID-19 positive person, are required to self-report using <https://www.southeasterntech.edu/covid-19/>. Report all positive cases of COVID-19 to your instructor and [Stephannie Waters](mailto:swaters@southeasterntech.edu), Exposure Control Coordinator, [swaters@southeasterntech.edu](mailto:swaters@southeasterntech.edu), 912-538-3195.

## **HYBRID ATTENDANCE**

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 will have at least one week to complete tests and assignments. All tests and assignments are due at **11:59PM** on **Wednesday** of the following week. 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 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: [Daphne Scott](mailto:dscott@southeasterntech.edu) ([dscott@southeasterntech.edu](mailto:dscott@southeasterntech.edu)) 478-289-2274, Building 1, Room 1210.

Vidalia Campus: [Helen Thomas](mailto:hthomas@southeasterntech.edu) ([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: [Daphne Scott](mailto:dscott@southeasterntech.edu) ([dscott@southeasterntech.edu](mailto:dscott@southeasterntech.edu)) 478-289-2274, Building 1, Room 1210.

Vidalia Campus: [Helen Thomas](mailto:hthomas@southeasterntech.edu) ([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.

### **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 the 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.

### **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 midnight 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:

<b>American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer</b>	<b>Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer</b>
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:Helen.Thomas">Helen Thomas</a>	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:Lanie.Jonas">Lanie Jonas</a>

<b>American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer</b>	<b>Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer</b>
hthomas@southeasterntech.edu	ljonas@southeasterntech.edu

### 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
Comprehensive Final	20%
Hands-on Skills Final	20%
Chapter Exams	25%
Packet Tracer Assignments	15%
Lab Assignments	20%

### GRADING SCALE

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

You can purchase a book for this course but the curriculum can and should be accessed thru the Cisco NetSpace CMS as well. This online curriculum includes all interactive learning activities and provides an additional way to help you learn the course material. You will complete module labs, packet tracer activities, and exams. You will also have a hands-on skills exam and comprehensive final. You should have received an email with information on logging in and setting up your account. Once you get logged in, I encourage you to download and install the Packet Tracer software. This is an excellent program that you will need installed to complete assignments as well as learn the concepts covered in this course. Contact your instructor if you have any questions. All necessary Packet Tracer and Lab files can be downloaded from course page. You will need access to Microsoft Word software as well.

#### **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 2451 Introduction to Networks FALL Semester 2021 (FY 202212) Lesson Plan

**Key:** Aug = August, Sept = September, Oct=October, Nov=November, Dec= December

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 1 Aug 16 – 22	1	Networking Today		1,7 A,C
Hybrid			<p><b>Logon to the course on BLACKBOARD.</b></p> <p>Complete <b><u>Pledge, Student Introduction, COVID 19 Presentation Acknowledgement, and Syllabus Quiz</u></b> on Blackboard.</p> <p>Download, complete, sign and upload digital image (scan or readable picture) of the <b><u>Consent to Disclose Student Records</u></b> form on Blackboard.</p> <p><b>These 5 tasks must be completed no later than August 18, 2021 to remain in this class.</b></p> <p>Read and study: <b>Module 1 – Networking Today</b></p> <p>Download and Install Packet Tracer software (v8.0) at home. (see <b>Student Resources</b> link)</p> <p>Do Module 1 <b><u>Packet Tracer Activities: 1.0.5, 1.5.5</u></b> on NetSpace (Submit both .pka files in Module 1 PT Assignments)</p>	
Lab			<p>Check email and setup NetSpace account.</p> <p>Verify NetSpace login.</p> <p>Review Course Syllabus, Cisco NetSpace, and Packet Tracer</p> <p>Review Course Introduction (online)</p> <p>Complete <b><u>Lab: 1.9.3</u></b> for Module 1.</p>	

**Week 1 assignments must be completed and turned in before midnight Aug 25.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 2 Aug 23 – 29	2	Basic Switch and End Device Configuration		1,2,3 A,C
Hybrid			Read and study: <b>Module 2 – Basic Switch and End Device Configuration</b>  Do Module 2 <b>Packet Tracer Activities: 2.3.7, 2.5.5, 2.7.6, 2.9.1</b> on NetSpace (Submit all .pka files in Module 2 PT Assignments)	
Lab			Complete <b>Labs: 2.3.8, 2.9.2</b> for Module 2.	

**Week 2 assignments must be completed and turned in before midnight Sep 1.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 3 Aug 30 – Sep 5	3	Protocols and Models		1,4,6 A,C
Hybrid			Read and study: <b>Module 3 – Protocols and Models</b>  Do Module 3 <b>Packet Tracer Activities: 3.5.5</b> on NetSpace (Submit your .pka files in Module 3 PT Assignments)  Complete <b>Exam</b> for Modules 1-3.	
Lab			Complete <b>Labs: 3.4.4, 3.7.9, 3.7.10</b> for Module 3.	

**Week 3 assignments must be completed and turned in before midnight Sep 8.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 4 Sep 6		Holiday – No class		
Sep 7 - 12	4 5	Physical Layer Number Systems		1,5 A,C
Hybrid			Read and study: <b>Module 4 – Physical Layer</b>  Do Module 4 <b>Packet Tracer Activities: 4.6.5, 4.7.1, 4.7.2</b> on NetSpace (Submit all .pka files in Module 4 PT Assignments)  Read and study: <b>Module 5 – Number Systems</b>	
Lab			Complete <b>Lab: 4.6.6</b> for Module 4.	

**Week 4 assignments must be completed and turned in before midnight Sep 15.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 5 Sep 13 - 19	6	Data Link Layer		1,4 A,C
Hybrid			Read and study: <b>Module 6 – Data Link Layer</b>	
Lab			No lab this week	

**Week 5 assignments must be completed and turned in before midnight Sep 22.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 6 Sep 20 - 26	7	Ethernet Switching		1,3 A,C
Hybrid			Read and study: <b>Module 7 – Ethernet Switching</b>  Complete <b>Exam</b> for Modules 4-7.	
Lab			Complete <b>Labs: 7.1.6, 7.2.7, 7.3.7</b> for Module 7.	

**Week 6 assignments must be completed and turned in before midnight Sep 29.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 7 Sep 27 – Oct 3	8 9	Network Layer Address Resolution		4 A,C
Hybrid			Read and study: <b>Module 8 – Network Layer</b>  Read and study: <b>Module 9 – Address Resolution</b>  Do Module 9 <b>Packet Tracer Activities: 9.1.3, 9.2.9, 9.3.4</b> on NetSpace (Submit all .pka files in Module 9 PT Assignments)	
Lab			No lab this week	

**Week 7 assignments must be completed and turned in before midnight Oct 6.**



Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 8 Oct 4 - 10	10	Basic Router Configuration		1,2 A,C
Hybrid			<p>Read and study: <b>Module 10 – Basic Router Configuration</b></p> <p>Do Module 10 <b>Packet Tracer Activities: 10.1.4, 10.3.4, 10.3.5, 10.4.3</b> on NetSpace (Submit all .pka files in Module 10 PT Assignments)</p> <p>Complete <b>Exam</b> for Modules 8-10.</p>	
Lab			Complete <b>Labs: 10.4.4</b> for Module 10.	

**Week 8 assignments must be completed and turned in before midnight Oct 13.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 9 Oct 11 – 17	11	IPv4 Addressing		1-7 A,C
Hybrid			<p>Read and study: <b>Module 11 – IPv4 Addressing</b></p> <p>Do Module 11 <b>Packet Tracer Activities: 11.5.5, 11.7.5, 11.9.3, 11.10.1</b> on NetSpace (Submit all .pka files in Module 11 PT Assignments)</p>	
Lab			Complete <b>Labs: 11.6.6, 11.10.2</b> for Module 11.	

**Week 9 assignments must be completed and turned in before midnight Oct 20.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 10 Oct 18 - 24	12 13	IPv6 Addressing ICMP		1,2 A,C
Hybrid			<p>Read and study: <b>Module 12 – IPv6 Addressing</b></p> <p>Do Module 12 <b>Packet Tracer Activities: 12.6.6, 12.9.2</b> on NetSpace (Submit both .pka files in Module 12 PT Assignments)</p> <p>Read and study: <b>Module 13 – ICMP</b></p> <p>Do Module 13 <b>Packet Tracer Activities: 13.2.6, 13.2.7, 13.3.1</b> on NetSpace (Submit all .pka files in Module 13 PT Assignments)</p> <p>Complete <b>Exam</b> for Modules 11-13.</p>	
Lab			<p>Complete <b>Labs: 12.7.4, 12.9.2</b> for Module 12.</p> <p>Complete <b>Labs: 13.3.2</b> for Module 13.</p>	

**Week 10 assignments must be completed and turned in before midnight Nov 3.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 11 Oct 25 – 31	14	Transport Layer		1,2 A,C
Hybrid			<p>Read and study: <b>Module 14 – Transport Layer</b></p> <p>Do Module 14 <b>Packet Tracer Activities: 14.8.1</b> on NetSpace (Submit your .pka files in Module 14 PT Assignments)</p>	
Lab			No lab this week	

**Week 11 assignments must be completed and turned in before midnight Nov 3.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 12 Nov 1 - 7	15	Application Layer		1,2 A,C
Hybrid			Read and study: <b>Module 15 – Application Layer</b>  Complete <u>Exam</u> for Modules 14-15.	
Lab			Complete <u>Lab: 15.4.8</u> for Module 15.	

**Week 12 assignments must be completed and turned in before midnight Nov 10.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 13 Nov 8 - 14	16	Network Security Fundamentals		1,2 A,C
Hybrid			Read and study: <b>Module 16 – Network Security Fundamentals</b>  Do Module 16 <u>Packet Tracer Activities: 16.5.1</u> on NetSpace (Submit your .pka files in Module 16 PT Assignments)  Complete <u>PT Practice Skills Exam</u>	
Lab			Complete <u>Labs: 16.2.6, 16.4.7, 16.5.2</u> for Module 16.	

**Week 13 assignments must be completed and turned in before midnight Nov 17.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 14 Nov 15 - 21	17	Build a Small Network		1,2 A,C
Hybrid			<p>Read and study: <b>Module 17 – Build a Small Network</b></p> <p>Do Module 17 <b>Packet Tracer Activities: 17.7.6, 17.8.2, 17.8.3</b> on NetSpace (Submit your .pka files in Module 17 PT Assignments)</p> <p>Complete <b>Exam</b> for Modules 16-17.</p> <p><b>Schedule with Instructor:</b> On-Campus Hands-on Skills Exam</p>	
Lab			Complete <b>Labs: 17.4.6, 17.7.7, 17.8.1</b> for Module 17.	

**Week 14 assignments must be completed and turned in before midnight Dec 2.**

Week/Date	Module	Content	Assignments & Test Due Dates	Competency Area
Week 15 Nov 22 - 23		Final Review Schedule Hands-on Skills Exam		1-7 A,C
Hybrid			<p>Study for Final Exam.</p> <p>Complete <b>Practice Final Exam</b></p>	
Lab			<p>Complete <b>PT Practice Skills Exam</b></p> <p>Be sure to save your work. You can use it (bring) to help complete your hands on skills exam!!!</p>	

**Week 15 assignments must be completed and turned in before midnight Dec 4.**

Week/Date	Chapter	Content	Assignments & Test Due Dates	Competency Area
Week 16 Nov 29 – Dec 2		Final Exam Hands-on Skills Exam (On campus)		1-7 A,C
Hybrid			<p><b>*Final Exam (covers all chapters)</b></p> <p>You must complete <b>*Course Feedback Survey</b> before taking the <b>Final Exam</b>.</p> <p>*Course Feedback Survey completion is required for student to receive course certificate and be qualified to take CIST 2452.</p>	
Lab		Must attend prescheduled lab time to complete the Hands-on Skills Exam	<b>Hands-on skills Exam (must be completed on campus in lab 815 this week during prescheduled time slot)</b>	

**Week 16 assignments must be completed and turned in before midnight Dec 8.**

#### COMPETENCY AREAS:

1. Network Basics
2. Application Layer Protocols and Services
3. Transport Layer Protocols and Services
4. Network Layer Addressing and Routing Concepts
5. Ethernet and Media Access Control
6. Network Cabling
7. Basic Network Configuration

#### 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.