

### TEIT 1100 - Introduction to Networking (1 Credit)

# **Course Description**

Introduction to Networking provides foundational-level instruction on the concepts, models, services, settings, protocols, topologies, and devices used in computer networks. Students will also explore the Open Systems Interconnection (OSI) and Transmission Control Protocol/Internet Protocol (TCP/IP) models.

## **Course Objectives**

- Define common concepts and terms associated with computer networking.
- Identify and differentiate the purpose and function of common networking devices.
- Identify and differentiate common networking ports, protocols and services.
- Identify components of the OSI and TCP/IP models.
- · Compare and contrast network topologies and access methods.

#### **Course Outline**

- Data Transmission
- Hardware and Topologies

### **Textbook & Reading Materials**

TestOut Network Pro, Test Out, ISBN: 9781935080435

### **Assignments and Assessments**

Course Introduction and Standards

Meet Your Instruction Team

Rules of the Lab

CS Code of Conduct Policy

Submitting Assignments in Canvas

Taking a Screenshot

Orientation

Syllabus Agreement

1.1 - Networking Overview

1.1.7 - Identify Network Topologies

1.1.8 - Lab: Create Network Topologies

1.1.9 - Lesson Review

1.2.9 - Lesson Review

1.3.8 - Laib: Explore a Single Location in a Lab

1.3.9 - Lab: Create a Home Wireless Network

1.3.10 - Lab: Create a SOHO Network

1.3.11 - Lesson Review

1.4.10 - Lab: Troubleshooting Methodology

1.4.11- Lesson Review

1.6 - Module Quiz

2.1.7 - Lab: Reconnect to an Ethernet Network

2.1.8 - Lesson Review

2.2.7 - Identify Copper Cables

2.2.8 - Identify Copper Connect ors

Skills Check: Network Cabling

2.2.9 - Lab: Connect to an Ethernet Network

2.2.10 - Lab: Connect a Cable Modem

2.2.11- Lesson Review

2.3.6 - Lab: Explore Multiple Locations in a Lab

2.3.7 - Laib: Connect Network Devic,es

2.3.8 - Lab: Connect Patch Panel Cables 1

2.3.9 - Laib: Connect Patch Panel Cables 2

2.3.10 - Lesson Review

2.4.7 - Identify Fiber Optic Connect ors

2.4.9 - Lab: Connect Fiber Optic Cables

2.4.10 - Lesson Review

2.5.5 - Lesson Review

2.6.10 - Lab: Explore Physical Connectivity 1

2.6.11- Lab: Explore Physical Connectivity 2

2.6.12 - Lab: Troubleshoot Physical Connectivity 1

2.6.13 - Lab: Troubleshoot Physical Connectivity 2

2.6.14 - Lab: Troubleshoot Physical Connectivity 3

2.6.15 - Lab: Troubleshoot Physical Connectivity 4

2.6.16 - Lesson Review

2.8 - Module Quiz

Student Acknowledgement Statement Module 1

Checkpoint Meeting Module 1

3.1 - Network Interfaces

3.1.7 - Identify Parts of a MAC Address

3.1.8 - Lab: Select and Install a Network Adapter

3.1.9 - Lab: Connect a Media Converter

3.1.10 - Lesson Review

3.2.7 - Lab: Install a Switch in the Back

3.2.8 - Laib: Secure a Switch

3.2.9 - Lab: Cisco 105 Basics

3.2.10 - Lesson Review

3.3.6 - Laib: Configure Port Aggregation

3.3.7 - Lab: Enable Jumbo Frame Support

3.3.9 - Lesson Review

3.4.8 - Lab: Troubleshoot Disabled Ports

3.4.9 - Lab: Switching Loop

3.4.10 - Lesson Review

3.6 - Modlule Quiz

3.7 - Checkpoint Review

4.1.6 - Lab: Explore Packets and Frames

4.1.7 - Lab: Explore ARP in Wireshark

4.1.8 - Lesson Review

4.2.9 - Lab: Configure IP Addresses

4.2.10 - Lab: Configure IP Addresses on Mobile Devices

4.2.11- Lab: Configure IP Addresses on Linux

4.2.12 - Lesson Review

4.3.7 - Laib: Configure IP Networks and Subnets

Skills Check Subnetting

4.3.8 - Lesson Review

4.4.5 - Lab: IPv4 Troubleshooting Tools

4.4.6 - Lab: IPv4 Troubleshooting tools for Linux

4.4.7- Laib: Use IPv4 Test Tools

4.4.8 - Lesson Review

4.5.9 - Lab: Configure an 1Pv6 Address

4.5.10 - Lesson Review

4.6.4 - Lab: Use ping and t racert on Windows

4.6.5 - Lab: Use ping and t raceroute on Linux

4.6.6 - Lab: Assisted Troubleshooting 1

4.6.7 - Lab: Assisted Troubleshooting 2

4.6.8 - Lab: Assisted Troubleshooting 3

4.6.9 - Lesson Review

4.8 - Module Quiz

End of Course Survey

**Checkpoint Meeting Module 2** 

Student Acknowledgement Statement Module 2

Subject to change. Please consult your Canvas course for the most current instructions and updates.

#### **Classroom Hours**

Mo, Tu, W, Th, Fr 8:00 AM - 11:00 AM 12:00 PM - 3:00 PM

For a full list of course hours visit: Course Schedule

#### **Instructor Contact Information**

Greg Davis — gdavis@stech.edu Austin Prince — aprince@stech.edu

Office Hours: By appointment

Email is the preferred method of communication; you will receive a response within 24 hours during regular business hours.

#### **Canvas Information**

Canvas is the where course content, grades, and communication will reside for this course.

- stech.instructure.com
- For Canvas passwords or any other computer-related technical support contact Student Services.
- For regular Hours and Weekdays call (435) 586 2899.
- For after Hours & Weekends call (435) 865 3929 (Leave a message if no response).

#### **Course Policies**

Course Grading: All assignments in this course require 100% score with unlimited submissions. All quizzes require a minimum score of 80%.

High School Power School Grades: Quarter student grades will be determined by student progress percentage. Faculty will use the higher percentage of either 1) quarter progress, or 2) cumulative progress for the current training plan year.

Grade Scale: The following grading scale will be used to determine a letter grade.

• A:94-100%

• B:83-86%

• C:73-76%

• D:63-66%

• A-: 90 - 93%

• B-: 80 - 82%

• C-: 70 - 72%

• D-: 60 - 62%

• B+: 87 - 89%

• C+: 77 - 79%

• D+: 67 - 69%

• F:0-59%

Course Policies: You are required to keep your progress and attendance at 67% minimum. You must complete this program within 150% estimated program length. You are permitted one 15 minute break every 90 minutes. If you take more than one break in a 90 minute period or your break lasts longer than 15 minutes, your attendance will be penalized. 10 consecutive absences will lead to being withdrawn from the program. Please notify your instructors about absences as soon as possible. If absence is due to illness, please email your instructors prior to end of day. Cell Phone/Electronics – Cell phones cannot be used during class time. You may bring your personal computers to class. You must be on topic in the lab while clocked-in. Industry Environment – computer science typically is very sedentary. This means you may sit at a desk for long hours. Be sure to move and get what exercise you can.

#### **Additional Information**

InformaCast Statement: Southwest Tech uses InformaCast to ensure the safety and well-being of our students. In times of emergency, such as weather closures and delays, this app allows us to promptly deliver notifications directly to your mobile devices. To stay informed and receive real-time updates, we encourage all students to sign up for notifications. Your safety is our priority, and staying connected ensures a swift response to any unforeseen circumstances. More information and directions for signing up are available at: <a href="https://stech.edu/emergency-notifications/">https://stech.edu/emergency-notifications/</a>

Internet Acceptable Use Policy: The student is expected to review and follow the Southwest Technical College Internet Safety Policy at: <a href="https://stech.edu/students/policies/">https://stech.edu/students/policies/</a>

Student Code of Conduct Policy: The student is expected to review and follow the Southwest Technical College Student Code of Conduct Policy at: <a href="https://stech.edu/students/policies/">https://stech.edu/students/policies/</a>

Accommodations: Students with medical, psychological, learning, or other disabilities desiring accommodations or services under ADA, must contact the Student Services Office. Student Services determines eligibility for and authorizes the provision of these accommodations and services. Students must voluntarily disclose that they have a disability, request an accommodation, and provide documentation of their disability. Students with disabilities may apply for accommodations, based on an eligible disability, through the Student Services office located at 757 W. 800 S., Cedar City, UT 84720, and by phone at (435) 586-2899. No diagnostic services are currently available through Southwest Technical College.

Safety and Building Maintenance: The College has developed and follows a variety of plans to ensure the safe and effective operation of its facilities and programs. The following plans are available online:

1) Facilities Operations and Maintenance Plan; 2) Technical Infrastructure Plan; and 3) Health and Safety Plan.

Withdrawals and Refunds: Please refer to the Southwest Technical College Refund Policy at: <a href="https://stech.edu/students/policies/">https://stech.edu/students/policies/</a>

Any high school or adult student, who declares a technical training objective is eligible for admission at Southwest Technical College (Southwest Tech). Program-specific admissions requirements may exist and will be listed on the Southwest Tech website. A high school diploma or equivalent is not required for admission but is mandatory for students seeking Title IV Federal Financial Aid.

Non-Discriminatory Policy: Southwest Technical College affirms its commitment to promote the goals of fairness and equity in all aspects of the educational enterprise, and bases its policies on the idea of global human dignity.

Southwest Tech is committed to a policy of nondiscrimination. No otherwise qualified person may be excluded from participation in or be subjected to discrimination in any course, program or activity because of race, age, color, religion, sex, pregnancy, national origin or disability. Southwest Technical College does not discriminate on the basis of sex in the education programs or activities that it operates, as required by Title IX and 34 CFR part 106. The requirement not to discriminate in education programs or activities extends to admission and employment. Inquiries about Title IX and its regulations to STECH may be referred to the Title IX Coordinator, to the Department of Education, and/or to the Office for Civil rights.

If you believe you have experienced discrimination or harassment on our campus, please contact the Title IX Coordinator, Cory Estes: cestes@stech.edu, (435) 865-3938.

For special accommodations, please contact the ADA Coordinator, Cyndie Tracy: ctracy@stech.edu, (435) 865-3944. Southwest Technical College 757 West 800 South Cedar City, UT 84720 info@stech.edu (435) 586-2899