SOUTHWEST TECH
SOUTHWEST TECHNICAL COLLEGE

TEIT 1200 - A+ Core I (3 Credits)

Course Description

A+ Core I prepares students to be successful computer technicians, capable of installing, maintaining, troubleshooting, optimizing, and securing desktop computers, laptops, mobile devices, and printers. This course aligns with the objectives of the CompTIA A+ Core 1 certification exam.

Course Objectives

- Install and configure computer hardware components and peripheral devices.
- Identify and configure basic networking components and protocols.
- Install and configure laptops and other mobile devices.
- Diagnose and troubleshoot device and network issues.
- Compare and contrast cloud computing concepts.
- Configure client-side virtualization.

Course Outline

- PC Hardware
- Storage and Troubleshooting
- Networking Basics
- Remote Access and Virtualization
- Mobile Devices and Printing
- Support Procedures

Textbook & Reading Materials

TestOut PC Pro, Test Out, ISBN: 9781935080428

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
Orientation Acknowledgement
Syllabus Agreement
Module 1.0 introduction
1.4 - Module Quiz
2.1.2 - Lab: Explore the Lab Interface
2.1.6 - USB Cables and Standards
2.1.7 - Laib: Install USB Devices
2.1.16 - Lab: Set Up a Desktop Computer
2.1.17 - Lesson Review
2.2.9 - Install a Motherboard
Skills Check: Motherboard Form Factors
2.2.11 - Lab: Choose and Install a Motherboard
2.2.13 - Lab: Upgrade a Video Card
2.2.17 - Installing & Configuring Moitherboards, CPUs & Add-on Cards
2.2.18 - Lesson Review
2.3.2 - Lab: Select and Configure Dual Monitors
2.3.5 - Lesson Review
2.4 - Lab: Set up an A/V Workstation
2.6 - Module Quiz
Student Acknowledgement Statement Module 1
Checkpoint Meeting Module 1
Module 3.0 introduction
3.1.2 - Lab: Install a Power Supply
3.1.9 - Lab: Troubleshoot Power Supply Problems
3.1.14 - Lesson Review
3.2.1 - Storage Devices
3.2.9 - RAID Types
3.2.12 - Lab: Install SATA Devices
3.2.13 - Lesson Review
3.3.4 - Lab: Select Memory by Sight
3.3.7 - Lab: Install Triple Channel Memory
3.3.9 - Lesson Review
3.4.8 - Install a Processor
3.4.9 - Lesson Review
3.5 - Challenge Lab: Troubleshoot Memory
3.7 - Module Quiz
4.1.2 - Lab: Find BIOS/UEFI Settings
4.1.7 -Activity: Secure Boot Feedback
4.1.9 - Activity: TPM Hash Comparison
4.1.10 - Lab: Configure BIOS/UEFI Security
4.1.11- Lesson Review
4.2.2 - Laib: Troubleshoot System Power
4.2.4 - Lab: Troubleshoot System Startup
4.2.6 - Lab: Troubleshoot Boot Issues
4.2.10 - Lab: Troubleshoot Drive Availability

4.2.13 -Troubleshooting Problems with Storage Drives & RAID Arrays
4.2.14 - Lesson Review
4.3.8 - Troubleshooting Video, Projector & Display Issues
4.3.9 - Lab: Troubleshoot GPU
4.4 - Lab: Resolve PC Hardware Support Tickets
4.5 - Lab: Troubleshoot a Malfunctioning Computer
4.7 - Module Quiz
4.8 - Checkpoint Review
Student Acknowledgement Statement Module 2
Checkpoint Meeting Module 2
Module 5.0 introduction
5.1.4 - SOHO, Enterprise, and Personal Area Networks
Skills Check: Networking Rack Equipment
5.1.5 - Lesson Review
5.2.2 - Lab: Select and Install a Network Adapter
5.2.4 - W1iring a Patch Panel
5.2.5 - Lab: Connect Patch Panel Cables
5.2.7 - How Does an Access Switch Forward Data?
5.2.8 - Laib: Connect Computers with a Switch
5.2.11- Lesson Review
5.3.3 - Activity: Identify Unshielded and Shielded Twisted Pair
5.3.6 - Activity: Identify Copper Connectors
5.3.12 - Activity: Identify Fiber Optic Connectors
5.3.14 - Lesson Review
5.4.13 - Lab: Secure a Small Wireless Network
5.4.14 - Lab: SOHO Wi-Fi Configuration Settings
5.4.15 - Lesson Review
5.6 - Modlule Quiz
6.1.4 - Lab: Connect a Cable Modem
6.1.6 - Lab: Connect Fiber Optic Cables
6.1.11- Lesson Review
6.2.7 - Lab: Configure IP Addresses
6.2.13 - Static vs Dynamic
6.2.16 - Lesson Review
6.3.3 - Network Packets
6.3.5 - W1ireshark
6.3.7 - Lesson Review
6.4.8 - Lesson Review
6.5 - Challenge Lab: Install a SOHO Network
6.7 - Module Quiz
Student Acknowledgement Statement Module 3
Checkpoint Meeting Module 3
Module 7.0 introduction
7.1.7 - Navigate a Mailbox Server
7.1.12 - Lesson Review
7.2.2 - Lab: Use a Proxy Server
7.2.8 - Lesson Review
7.3.3 - Lab: Fix a Network Connection
7.3.7 - Lesson Review
7.4 - Lab: Troubleshoot a Network Issue
7.6 - Modlule Quiz
7.7 • Checkpoint Review

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%
- A- : 90 - 93%
- B+ : 87 - 89%
- B : 83 - 86%
- B- : 80 - 82%
- C+ : 77 - 79%
- C : 73 - 76%
- C- : 70 - 72%
- D+ : 67 - 69%
- D : 63 - 66%
- D- : 60 - 62%
- 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: https://stech.edu/emergency-notifications/

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

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

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: https://stech.edu/students/policies/

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.
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