

## TEIT 2171 - Computer Networks II (2 Credits)

### Course Description

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

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### Course Objectives

- Compare and contrast networking appliances, applications, and functions.
  - Identify the purpose of organizational processes and procedures.
  - Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
  - Identify and implement network defense techniques, security features, and security solutions.
  - Configure secure enterprise wireless networks.
  - Identify basic datacenter, cloud, and virtual-networking concepts.
  - Compare and contrast network access and management methods.
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### Course Outline

- Specialized Networks
  - Wireless Networking
  - Wide Area Networks, Operations and Management
  - Security, Optimization and Troubleshooting
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### Textbook & Reading Materials

TestOut Network Pro, Test Out, ISBN: 9781935080435

## Assignments and Assessments

10.1 - Aut hentication  
10.1.9 - Lesson Review  
10.2.5 - Lab: Manage Account Policies  
10.2.6 - Lesson Review  
10.3.3 - View Linux Services  
10.3.5 - Lab: Scan for Unsecure Protocols  
10.3.6 - Lab: Enable and Disable Linux Services  
10.3.7 - Lab: Disable Network Service  
10.3.8 - Lesson Review  
10.4.2 - Lab: Secure Access to a Swit ch  
10.4.3 - Lab: Secure Access to a Swit ch 2  
10.4.4 - Lab: Disable Switch Ports - GUI  
10.4.7 - Lab: Harden a Switch  
10.4.9 - Lesson Review  
Student Acknowledgement Statement Module 1  
Checkpoint Meeting Module 1  
10.5 - Network Security Rules  
10.5.6 - Lab: Configure Network Security Appliance Access  
10.5.7 - Lab: Configure a Security Appliance  
10.5.8 - Lab: Configure a Perimeter Firewall  
10.5.9 - Lab: Restrict Telnet and SSH Access  
10.5.10 - Lab: Permit Traffic  
10.5.11 - Lab: Block Source Hosts  
10.5.12 - Lesson Review  
10.6 - Module Quiz  
11.1.5 - Lab: Configure a Screened Subnet (DMZ)  
11.1.6 - Lab: Configure Screened Sub nets  
11.1.9 - Lab: Implement Intrusion Prevention  
11.1.10 - Lesson Review  
11.2.5 - Lab: Scan for IoT Devices  
11.2.6 - Lesson Review  
11.3.4 - Lab: Implement Physical Security  
11.3.5 - Lesson Review  
11.4 - Module Quiz  
12.1.9 - Lab: Configure Wireless Profiles  
12.1.10 - Lesson Review  
Student Acknowledgement Statement Module 2  
Checkpoint Meeting Module 2  
12.2.8 - Lab: Design an Indoor Wireless Network  
12.2.9 - Lab: Design an Outdoor Wireless Network  
12.2.10 - Lab: Implement an Enterprise Wireless Network  
12.2.11 - Lesson Review  
12.3 - Wireless Security  
12.3.7 - Lab: Configure a Captive Portal  
12.3.8 - Lab: Create a Guest Network for BYOD  
12.3.9 - Lab: Secure an Enterprise Wireless Network  
12.3.10 - Lab: Secure a Home Wireless Network  
12.3.11 - Lab: Enable Wireless Intrusion Prevention  
12.3.12 - Lesson Review  
12.4.7 - Lab: Explore Wireless Network Problems  
12.4.8 - Lab: Troubleshoot Wireless Network Problems  
12.4.9 - Lab: Optimize a Wireless Network  
12.4.10 - Lesson Review

12.5 - Module Quiz  
12.6 - Checkpoint Review  
Student Acknowledgement Statement Module 3  
Checkpoint Meeting Module 3  
13.1.4 - Lesson Review  
13.2.8 - Lab: Configure a Remote Access VPN  
13.2.9 - Lab: Configure an iPad VPN Connection  
13.2.10 - Lab: Configure a RADIUS Solution  
13.2.11 - Lesson Review  
13.3.8 - Lab: Allow Remote Desktop Connections  
13.3.9 - Lab: Use PowerShell Remote  
13.3.10 - Lesson Review  
13.4 - Module Quiz  
14.1.5 - Lab: Configure an iSCSI Target  
14.1.6 - Lab: Configure an iSCSI Initiator  
14.1.7 - Lesson Review  
14.2.5 - Lesson Review  
14.3.7 - Lesson Review  
14.4.9 - Lesson Review  
14.5 - Module Quiz  
Student Feedback Survey  
End of Course Student Acknowledgement Statement  
Course Completion Checkpoint Meeting

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*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](#)

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## Instructor Contact Information

Greg Davis — [gdavis@stech.edu](mailto:gdavis@stech.edu)  
Austin Prince — [aprince@stech.edu](mailto: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.

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## Canvas Information

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

- [stech.instructure.com](https://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

All Students: This course is pass or fail. All assignments in this course require 100% score with unlimited submissions. All quizzes in this course require a minimum score of 80%. Each module of this course will contain at least one quiz. There is a student/teacher checkpoint meeting at the end of each module. You are required to keep your progress at a 67% minimum throughout the program. Progress is determined by the number of completed module hours (15 hours per module) divided by the number of enrolled hours.

Iron County High School Students: In addition to the above information, Iron County students have the following policies. Your progress grade will be submitted every Friday to PowerSchool. You must maintain a progress percentage of 67% or over to stay in the course. You will receive a No-Grade (NG) in the course until all course fees are paid.

Attendance All Students: You are required to keep your attendance at a 67% minimum throughout the program. Attendance is determined by the number of attended hours divided by the number of enrolled hours. 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. As per Southwest Tech policy, 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.

Iron County High School Students: In addition to the above information, Iron County students must maintain an attendance percentage of 67% or over to stay in the course. Cell Phone/Electronics Cell phones cannot be used during class time. In the lab, the PCs are reserved for students in IT courses. All students can use the iMacs, which run OSX, Windows, and Linux operating systems. 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.

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. The progress percentage will be used with the grading scale to determine the minimum grade. High School Grade Scale: The following grading scale will be used to determine a letter grade from the progress percentage:

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|-----------------|-----------------|-----------------|-----------------|
| • 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%   |

## 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](mailto:cestes@stech.edu), (435) 865-3938.

For special accommodations, please contact the ADA Coordinator, Cyndie Tracy: [ctracy@stech.edu](mailto:ctracy@stech.edu), (435) 865-3944.

Southwest Technical College

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