

CS80.15: IT Essentials 1: PC Hardware and Software: Section 5325: Rosen S

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SPRING 2023

CS80.15: IT Essentials 1: PC Hardware and Software

Tuesdays 5:30pm – 9:30pm Room PC 643

Description

This course covers the fundamentals of computer hardware and software as well as advanced concepts. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Students will also be able to connect to the Internet and share resources in a network environment. New topics included in this version include laptops and portable devices, wireless connectivity, security, safety and environmental issues, and communication skills.

Hands-on lab activities will continue to be an essential element of the course. In support of this, virtual learning tools have been integrated into this course.

Section Information

https://portal.santarosa.edu/SRWeb/SR_SectionInformation.aspx?Semester=20223&Section=5325 (https://portal.santarosa.edu/SRWeb/SR_SectionInformation.aspx?Semester=20223&Section=5325)

Target Audience

IT Essentials: PC Hardware and Software is intended for students in high school, technical school, community college, or a four-year institution who want to pursue careers in IT and gain working knowledge of how computers work, how to assemble computers, and how to troubleshoot hardware and software issues.

Prerequisites

There are no prerequisites for this course, accept a desire to learn, study and get your hands dirty!

Target Certifications

IT Essentials: PC Hardware and Software v6.0 helps to prepare students for the CompTIA A+ certification exams 220-801 and 220-802. CompTIA A+ 220-801 covers the fundamentals of computer technology, installation and configuration of PCs, laptops, related hardware, and basic networking. CompTIA A+ 220-802 covers the skills required to install and configure PC operating systems and configure common features, such as network connectivity and email for Android and Apple iOS mobile operating systems. Students must pass both exams to earn the CompTIA A+ certification. (<http://www.comptia.org> (<http://www.comptia.org>)).

Objectives

The primary objective of this course is to prepare students for entry-level positions in the IT field within several different working environments

- A corporate or mobile environment with a high level of face-to-face client interaction. Job titles include enterprise technician, IT administrator, field service technician, and PC technician.
- A remote-based work environment where client interaction, client training, operating systems, and connectivity issues are emphasized. Job titles include remote support technician, help desk technician, call center technician, IT specialist, and representative.
- Settings with limited customer interaction where hardware-related activities are emphasized. Job titles include depot technician and bench technician.

In addition, students will gain confidence with the components of desktop and laptop computers by learning the proper procedures for hardware and software installations, upgrades, and troubleshooting.

Student Learning Outcomes

- Define information technology (IT) and describe the components of a personal computer. By the end of the course, students will be able to complete the following objectives:
- Protect herself or himself against accidents and injury, protect equipment from damage, and protect the environment from contamination.
- Perform a step by step assembly of a desktop computer tower.
- Explain the purpose of preventive maintenance and identify the elements of the troubleshooting process
- Explain, install, and navigate an operating system; upgrade components based on customer needs and perform preventive maintenance and advanced troubleshooting.

- Describe, remove, and replace select components of a laptop; upgrade components based on customer needs and perform preventive maintenance and advanced troubleshooting.
- Describe, remove, and replace select components of a printer/scanner; perform preventive maintenance and troubleshooting.
- Describe and install a network; upgrade components based on customer needs and perform preventive maintenance and advanced troubleshooting.
- Apply good communication skills and professional behavior while working with customers.
- Perform advanced installation of a desktop computer tower; select components based on customer needs and perform preventive maintenance and advanced troubleshooting.
- upgrade security components based on customer needs and perform preventive maintenance and advanced troubleshooting.

Instructor Contact



Dr. Scott Rosen

Office: CS Dept Office (Santa Rosa)

Fax: (707) 778-3910

Text: (707)478-8649

srosen@santarosa.edu (<mailto:srosen@santarosa.edu>)

Text is the fastest but I usually respond to emails within 48 hours.

Instructor Schedule:

Monday

5pm – 6pm

OFFICE HOURS

Location

ONLINE

6pm – 8pm
Campus)

CS5 Computer Literacy

2803 Maggini (SR

Tuesday

10am – 2pm	OFFICE HOURS	ONLINE
2pm - 4pm	Department Meeting / Academic Senate	
5pm – 5:30pm	OFFICE HOURS	ONLINE
5:30pm – 9:30pm	CS80.15 IT Essentials	PET643

Wednesday

5pm – 6pm	OFFICE HOURS	ONLINE
6pm – 8pm Campus)	CS5 Computer Literacy	2803 Maggini (SR

Thursday

5pm – 5:30pm	OFFICE HOURS	ONLINE
5:30pm – 9:30pm	CS84.13 IT Support	PET643

Course Web Site

[Cisco Networking Academy - This is where all assignments, lectures, quizzes and tests are](https://www.netacad.com/)
(<https://www.netacad.com/>)

Materials and Supplies (<http://msdn.microsoft.com/academic>)

Textbook & Website

Online Material at [Cisco Networking Academy \(https://www.netacad.com/\)](https://www.netacad.com/) Provided by Instructor
Tuesday Evening

- pen, paper
- USB Flash drive (at least 2 GB)
- Computer Toolkit





Computer Toolkit

The computer toolkit (**you will need to acquire your own**) should include the following tools:

- Phillips screwdriver
- Flathead screwdriver
- Needle-nose pliers
- Electrostatic discharge (ESD) wrist strap and cord
- Lint-free cloth
- Electronics cleaning solution
- Flashlight
- Thermal compound
- Software Tools
- Notebook
- Other tools as recommended by instructor

Useful but not required

- Hex Socket Drivers (various sizes)
- Safety glasses
- Multimeter (optional)
- Digital Camera (optional)
- Compressed air service canister

example:

IFIXIT Pro Tech Toolkit

Although not required, the **IFIXIT Pro Tech Toolkit** is a good kit and students really like it although it

is a bit more expensive than other kits approx \$75

<https://www.ifixit.com/Store/Tools/Pro-Tech-Toolkit/IF145-307?o=4> (<https://www.ifixit.com/Store/Tools/Pro-Tech-Toolkit/IF145-307?o=4>)

Important Dates:

Day Class Begins:	Wednesday, January 18, 2023
Day Class Ends:	Friday, May 19, 2023
Day/Time of Final Exam:	Friday, May 19, 2023 6:00 PM - 10:00 PM
Last Day to Add without instructor's approval:	Tuesday, January 24, 2023
Last Day to Add with instructor's approval:	Sunday, February 5, 2023
Last Day to Drop and be eligible for enrollment/course fee refund:	Sunday, January 29, 2023
Last Day to Drop without a 'W' symbol:	Sunday, February 5, 2023
Last Day to Drop with a 'W' symbol:	Sunday, April 23, 2023
Last Day to Opt for Pass/No Pass:	Friday, May 19, 2023
First Census Date:	Monday, February 6, 2023
Mid-Term Date:	3/27/2023 - 4/23/2023

Dropping the Class

If you decide to discontinue this course, it is your responsibility to officially drop it. A student may be

dropped from any class when that student's absences exceed ten percent (10%) of the total hours of class time. It is strongly advised that if you need to miss more than one class/homework deadline in a row that you contact the instructor to avoid being dropped from the class.

If you feel you must quit the class, please talk with me first. Together we may find a way for you to complete the course successfully. If you quit without officially dropping, you are still graded on all the remaining work, usually resulting in an "F" grade. <https://admissions.santarosa.edu/>

[\(https://admissions.santarosa.edu/\)](https://admissions.santarosa.edu/)

Attendance

I expect you to attend regularly.

If for any reason you will be absent, late, or leaving early, please let me know in advance (or as soon after as possible in case of emergency). Any absence without notifying me is unexcused. More than three unexcused absences may result in dismissal from class. After any absence, you are responsible for getting class handouts from the class Web page and notes from a classmate. You might also talk with me about when to turn in any assignments you missed.

Note: Students who fail to attend the first class meeting may be dropped by the instructor.

Tests and Exams

There are 14 online exams that you do as homework, an online midterm, final and skills final/project.

Grading

Grade Only: A \geq 90%, B \geq 80%, C \geq 70%, D \geq 60%

Grade Breakdown in %

ITEM	PERCENT	COMMENTS
Online Chapter Exams	50%	Homework - Using the Assessment Server. Must be completed within a week of the assignment else points will be deducted.
Online Final Exam	20%	Using the Assessment Server
Skill-Based Final Exam/Project	20%	Rubric to be distributed prior to the exam

Labs	10%	Labs - Using the Assessment Server. Must be completed within a week of the assignment else points will be deducted.
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Standards of Conduct

Respect

The best way to learn is through active participation; therefore, we respect others when talking by being on-time, listening actively, and by being polite even when we disagree with another's viewpoint. Please turn off all electronic devices. If you use a laptop for note taking, please sit in the front row with the sound off. No food in class please.

Students who register in SRJC classes are required to abide by the SRJC Student Conduct Standards. Violation of the Standards is basis for referral to the Vice President of Student Services or dismissal from class or from the College. See the [Student Code of Conduct page](https://student-conduct.santarosa.edu/). (<https://student-conduct.santarosa.edu/>)

Collaborating on or copying of tests or homework in whole or in part will be considered an act of academic dishonesty and result in a grade of 0 for that test or assignment. Students are encouraged to share information and ideas, but not their work. See these links on Plagiarism:

[SRJC Writing Center Lessons on avoiding plagiarism](#)

[SRJC's statement on Academic Integrity \(https://rightsresponsibilities.santarosa.edu/academic-integrity\)](https://rightsresponsibilities.santarosa.edu/academic-integrity)

PHYSICAL AND MENTAL HEALTH

Should you experience any physical or mental health issues, know that all of us at SRJC care about your well-being. SRJC's Student Health Services (SHS) has nurse practitioners and mental health therapists available. Confidential sessions are provided via secure Zoom or in-person. Sessions are free for SRJC students taking credit or non-credit classes, and some providers can converse with you in Spanish if you prefer. SHS also has on-site covid rapid testing and vaccinations available also at no cost. To start the process for any type of physical or mental health appointment contact Student Health at 707 527-4445 or email studenthealthservices@santarosa.edu (<mailto:studenthealthservices@santarosa.edu>). More information about all that Student Health Services provides is available at shs.santarosa.edu (<http://shs.santarosa.edu>).

Special Needs

If you need disability related accommodations for this class, such as a note taker, test taking services, special furniture, etc., please provide the Authorization for Academic Accommodations (AAA letter) from the Disability Resources Department (DRD) to the instructor as soon as possible. You may also speak with the instructor privately during office hours about your accommodations. If you have not

received authorization from DRD, it is recommended that you contact them directly.

[Disability Resources Department - \(https://drd.santarosa.edu/\)](https://drd.santarosa.edu/)

Tel: (707) 527-4278 Santa Rosa

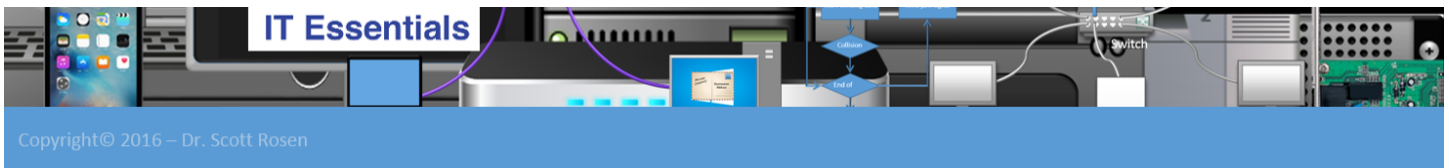
Tel: (707) 778-2491 Petaluma

Email: **disabilityinfo@santarosa.edu** (**<mailto:disabilityinfo@santarosa.edu>**)

Every effort is made to conform to accessibility standards for all instructor-created materials. Students should contact their instructor as soon as possible if they find that they cannot access any course materials. Students with disabilities who believe they need accommodations in this class are encouraged to contact Disability Resources (527-4278).

Useful Links

<http://www.santarosa.edu/~eskagerb/itessentials/reference.html> **[Cisco Networking Academy - This is where all assignments, lectures, quizzes and tests are \(https://www.netacad.com/\)](https://www.netacad.com/)**



Course Summary:

Date	Details	Due
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