



This course supports the assessment for Network and Security - Applications. The course covers 6 competencies and represents 4 competency units, and prepares for the CompTIA Security + (SY0-401) certification exam.

## Introduction

### Overview

How long do you think your business or organization would survive if your data was not secure? Computers can house social security numbers, financial data, educational records, health information, and even programs that control military weapons.

Long gone are the times when you only ensured that applications and systems were built to meet functional requirements. Security requirements are equally important, and existing systems are often overhauled to implement security measures. IT technology is constantly changing and so is the technology used by hackers and criminals. Security is a growing concern, and not just among IT professionals. Customers now consider how well an organization will protect their data when deciding with whom they will conduct business.

As an IT security professional, you are expected to implement techniques that secure networks and computers. Security attacks are on the rise and continue to be a concern for organizations worldwide. As a result, competent security professionals are in high demand. A career as an IT security professional will undoubtedly provide you with many opportunities in a variety of industries and organizational environments.

To be a competent security professional, you should know how to recognize and prevent security attacks, identify security needs for your organization, and understand encryption techniques. You should be able to effectively evaluate security risks and know how to leverage various access control models.

Your primary learning resource for this course is:

- uCertify

Launch uCertify

Your secondary learning resource for this course is:

- Skillssoft. Dulaney, E., & Easttom, C. (2014). *CompTIA security+ study guide: SYO-401* (6th ed.). Indianapolis, IN: Sybex-Wiley Publishing Inc. ISBN: 9781118875070

Launch Skillssoft

Competencies



This course provides guidance to help you demonstrate the following 6 competencies:

- **Competency 419.2.1: Basic Security Concepts**  
The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.
- **Competency 419.2.2: Access Control & Authentication Methods**  
The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.
- **Competency 419.2.3: Security for Network Infrastructure**  
The graduate identifies security needs and recommends appropriate security practices for network infrastructure.
- **Competency 419.2.4: Encryption**  
The graduate identifies and explains the role of encryption in network security.
- **Competency 419.2.5: Security for Organizational Operations**  
The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.
- **Competency 419.2.6: Security Assessments & Audits**  
The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.

### Course Mentor Assistance

As you prepare to successfully demonstrate competency in this subject, remember that course mentors stand ready to help you reach your educational goals. As subject matter experts, mentors enjoy and take pride in helping students become reflective learners, problem solvers, and critical thinkers. Course mentors are excited to hear from you and eager to work with you.

Successful students report that working with a course mentor is the key to their success. Course mentors are able to share tips on approaches, tools, and skills that can help you apply the content you're studying. They also provide guidance in assessment preparation strategies and troubleshoot areas of deficiency. Even if things don't work out on your first try, course mentors act as a support system to guide you through the revision process. You should expect to work with course mentors for the duration of your coursework, so you are welcome to contact them as soon as you begin. Course mentors are fully committed to your success!

## Getting Started

The information in this section is provided to detail the resources available for you to use as you complete this course.

### Course Mentor Tips

This course is not easy, so it is essential to read all of the applicable materials.

Make sure you do the pre-test and post-tests, along with all the sample tests.



The screenshot shows the uCertify course interface for CompTIA Security+ (Course & Lab). The left sidebar contains a list of course sections, each with an 'Open' button: Pre-Assessment (Identify areas for improvement with this 15 question assessment before you begin the course), Chapters & Lessons (Study lessons, complete labs, watch videos and work through flashcards, exercises and quizzes), Practice Tests (Prepare for your exam in this 500 question simulated test environment), Performance Based Lab (Learn the real world skills using performance based lab), and Post Assessment (Gauge your certification exam readiness). The right sidebar features a 'Manage as instructor' button, a progress indicator for 'Day 49' at 1% completion, a 'Start' date of 09-Jul-15 and a 'Target' date of 25-Aug-15, and a 'Certificate of Completion' section. Below that is a 'Test History & Performance Analytics' section.

Use the Study Planner to help gauge your pace through the course.

Make sure you are engaging in all course materials in Test Mode, and scoring 90% or better on all quizzes, exams, labs and tests. The cut score for the Security+ exam is 750 out of 900 or 84%. You want to at a minimum be in that area for your scores. You also want to make sure that you are working in the labs, as they will prepare you for the simulation questions that you will see on the test.

The concepts are not difficult, but if you have not seen them in real life the volume of information in this course can be overwhelming. Remember, the test is a mile wide but an inch deep. You should be familiar with everything but in-depth knowledge is not required.

Do not rely on the quizzes alone, they will not prepare you for the test.

Engage with your course mentors, we have all taken this exam and know how to help you when you encounter an issue.

## Course Work

The course work suggests a structure to monitor your learning activities. It is provided as a suggestion and does not represent a mandatory schedule. Follow the guide carefully to complete the course in the suggested order.

The lectures, videos, and exercises in your course work guide are constructed in a manner that they build on each other. Please make sure to complete each section in order. Each suggested



module has:

- Videos
- Lecture/exam essentials
- Exercises and quizzes
- Review questions
- Labs/simulations

## Preparing for your Course

Explore	Practice	Assess
Pre-Exam and Post-Exam in uCertify and Skillsoft	Take both Pre and Post exams using the score to help guide your study	Guide your study throughout this course

## Basic Security Concepts

This topic addresses the following competency:

- **Competency 419.2.1: Basic Security Concepts**

The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.

Explore	Practice	Assess
Measuring and Weighing Risk	Lesson 1 uCertify and Lesson 1 in Skillsoft	Take both LR's end of chapter exams

## Access Control & Authentication Methods

This topic addresses the following competency:

- **Competency 419.2.2: Access Control & Authentication Methods**

The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.

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Explore	Practice	Assess
Access Control Authentication and Authorization	Lesson 4 in uCertify and Lesson 4 in Skillsoft	Take both LR's end of chapter exams

## Security for Network Infrastructure

This topic addresses the following competency:

- **Competency 419.2.3: Security for Network Infrastructure**

The graduate identifies security needs and recommends appropriate security practices for network infrastructure.

Explore	Practice	Assess
Monitoring and Diagnosing Networks	Lesson 2 in uCertify and Lesson 2 in Skillsoft	Take both LR's end of chapter exams

## Encryption

This topic addresses the following competency:

- **Competency 419.2.4: Encryption**

The graduate identifies and explains the role of encryption in network security.

Explore	Practice	Assess
Cryptography	Lesson 8 in uCertify and Lesson 8 in Skillsoft	Take both LR's end of chapter exams

## Security for Organizational Operations

This topic addresses the following competency:

- **Competency 419.2.5: Security for Organizational Operations**

The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.

Explore	Practice	Assess
Security Administration	Lesson 11 in uCertify and Lesson 11 in	Take both LR's end of chapter exams



	Skillsoft
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## Security Assessments & Audits

This topic addresses the following competency:

- **Competency 419.2.6: Security Assessments & Audits**

The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.

Explore	Practice	Assess
Protocols, Attacks and Defenses	Lesson 2 in uCertify and Lesson 2 in Skillsoft	Take both LR's end of chapter exams

## Final Assessment Tips

One of the many things that makes WGU unique is its competency-based education model. If you know the material, all you have to do is prove it by passing the exam. If you can do this, you can accelerate the receipt of your degree.

This course is not easy, so it is essential to read all of the applicable materials.

Make sure you are engaging in all course materials in Test Mode, and scoring 90% or better on all quizzes, exams, labs and tests. The cut score for the Security+ exam is 750 out of 900 or 84%. You want to at a minimum be in that area for your scores. You also want to make sure that you are working in the labs, as they will prepare you for the simulation questions that you will see on the test.

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### Outside Vendor Assessment Information

You will complete the CompTIA Security+, 2014 Edition Exam:

- Exam ID: CompTIA Security+ 2014 Objectives (SY0-401 or educational code JK0-022) exam



- Number of Items: 90
- Passing score: at least 750 out of 900 points to be considered "passed."
- Time Limit: 90 minutes

*Note: Your voucher will show JK0-022, which is how CompTIA codes vouchers from educational institutions. The exam is the same as the SY0-401.*

*Note: Please note that CompTIA exams are no longer available at Prometric testing centers. Please see the CompTIA [KnowledgeBase](#) if you have questions.*

For directions on how to receive access to outside vendor assessments, see the "[Accessing Objective and Outside Vendor Assessments](#)" page.

### **Submitting Outside Vendor Assessment Scores**

After completing an outside vendor assessment, follow the directions for submitting a score report on the "[Following Outside Vendor Assessments](#)" page.

## **Accessibility Policy**

Western Governors University recognizes and fulfills its obligations under the Americans with Disabilities Act of 1990 (ADA), the Rehabilitation Act of 1973 and similar state laws. Western Governors University is committed to provide reasonable accommodation(s) to qualified disabled learners in University programs and activities as is required by applicable law(s). The Office of Student Accessibility Services serves as the principal point of contact for students seeking accommodations and can be contacted at [ADASupport@wgu.edu](mailto:ADASupport@wgu.edu). Further information on WGU's Accessibility policy and process can be viewed in the student handbook at the following link:

[Accessibility Policy](#)

## **Student Support**

WGU values your input! Please submit any feedback you have using the following form:

[Course Feedback](#)

Access the WGU Library 24 hours a day, 7 days a week:

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WGU Library

Visit the Student Success Center to access a variety of topics that will help you succeed at WGU:

Student Success Center

Contact the WGU Writing Center for help with any part of the writing or revision process:

WGU Writing Center