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Program Guidebook

Bachelor of Science, Cybersecurity and Information Assurance

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To meet an increasing demand for cybersecurity professionals, the Bachelor of Science in Cybersecurity, and Information Assurance (BSCSIA) degree program prepares IT professionals to apply knowledge and experience in vulnerability management, risk management, incident response, and cyber defense to safeguard data. Courses deliver proven methods for information security in the topics of penetration testing, network security, cloud security, scripting, intrusion detection, digital forensics, security operations, project management, cryptography, Artificial Intelligence (AI), data analytics, and Identity and Access Management (IAM) to prevent, detect, and mitigate cyberattacks. This program features nationally recognized, high demand certifications in the field of cybersecurity.

Understanding the Competency-Based Approach

How do competency-based programs like those offered at Western Governors University (WGU) work? Unlike traditional universities, WGU does not award degrees based on completing a certain number of credit hours or a specific set of required courses. Instead, you will earn your degree by demonstrating your skills, knowledge, and understanding of essential concepts.

Progress through a degree program is measured not by the amount of time you spend in class but by your ability to demonstrate competency as you complete required courses along a Standard Path. To help you acquire the knowledge and skills you need to demonstrate competency and complete your courses and program, WGU provides a rich array of learning resources. Your program mentor will work closely with you to help you understand your program's requirements and help you create a plan for completing your courses. You will also work closely with course instructors as you engage in each course. As subject matter experts, course instructors will guide you through the content you must learn to demonstrate competency through the course assessments.

The benefit of this competency-based system is that it enables students who are knowledgeable about a particular subject to make accelerated progress toward completing a degree, even if they lack college experience. You may have gained skills and knowledge of a subject while on the job, accumulated wisdom through years of life experience, or already taken a course on a particular subject. WGU will award your degree based on the skills and knowledge you possess and can demonstrate—not the number of hours spent in a classroom.

Accreditation

Western Governors University is the only university in the history of American higher education to have earned initial accreditation from multiple regional accrediting commissions at once—earning simultaneous accreditation from ACCJC, HLC, NWCCU, and WASC. The university’s accreditation from the Northwest Commission on Colleges and Universities (NWCCU) was reaffirmed in March of 2024. In addition to institution-level accreditation, each school has at least one program that is accredited by a programmatic accreditation. All programmatic accreditations are managed by the Academic Engagement department. Contact compliance@wgu.edu for additional information.

The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the courses you will need to complete in order to earn your degree. The Degree Plan also lays out the accompanying learning resources and assessments that compose your program. The list of courses in the Degree Plan is often referred to as the standard path. The amount of time it takes to complete your program depends on both the amount of new information you need to learn and the amount of time you plan to devote each week to study. Your program mentor and course instructors will help you assess your strengths and development needs to establish a study plan.

Students vary widely in the specific skills and information they need to learn. For example, some students may be highly knowledgeable in a particular subject matter and would not need to engage in new learning opportunities. Other students may find that portions of the program require them to learn new information and that they need to take an online class or participate in a study module to acquire the knowledge and skills needed to fulfill program competencies in that area. Some individuals may be able to devote as little as 15–20 hours per week to the program, while others may need to devote more time. For this reason, pre-assessments are there to help your program mentor form a profile of your prior knowledge and create a personalized Degree Plan.

How You Will Interact with Faculty

At WGU, faculty serve in specialized roles, and they will work with you individually to provide the guidance, instruction, and support you will need to succeed and graduate. As a student, it is important for you to take advantage of this support. It is key to your progress and ultimate success.

Upon enrollment, we will match you with a Program Mentor. A Program Mentor will work with you from your first term through graduation. Working with a Program Mentor means you will always have someone by your side on your academic journey. Often, they will be the first person you contact when you have a question or need assistance. Here are some of the main roles the Program Mentor plays throughout your academic program at WGU:

- Meet with you regularly to answer questions, keep you focused, and help plan the next steps.
- Help you develop a personalized term plan based on your personal strengths, challenges, schedules, and needs. This plan includes deciding which courses to take and the start and completion date goals for each course.
- Keep track of your progress through your term plan, and help you make adjustments to the term plan as needed to meet your graduation goal.
- Help you ensure that your course start dates are accurate to keep you on track for each term.
- Refer and connect you to support services and follow up on resolution as needed.

Additionally, as you begin each course, you will be partnered with Course Instructors, who are here to ensure you pass each course on the road to completing your degree program by your chosen graduation goal. Instructors are subject matter experts who are here to assist you in many ways, including:

- Welcome you to the course.
- Help you develop a course study plan.
- Answer content specific questions.
- Keep track of your course progress and engagement, and help you finish on time.
- Offer webinars that provide you with support and information to help you make progress.
- Celebrate with you when you pass an assessment and work with you on a personalized support plan if you need another assessment attempt.
- Work with you and your Program Mentor to discuss any changes to your course dates.

For many of the courses at WGU, you will be required to complete performance assessments. These include reports, papers, presentations, and projects that let you demonstrate your mastery of the required competencies. A separate group of faculty members, called evaluators, will review your work to determine whether it meets requirements. Evaluators are also subject matter experts in their field of evaluation. If your assessment needs further work before it “meets competency,” these evaluators, who review your work anonymously, will provide you with evaluation feedback to help you demonstrate competency and allow you to advance.

Connecting with Other Mentors and Fellow Students

As you proceed through your Degree Plan, you will have direct contact with multiple faculty members. These communications can take a variety of forms, including participation in one-on-one discussions, chats in the learning communities, and live cohort and webinar opportunities. As a WGU student, you will have access to your own personal MyWGU Student Portal, which will provide a gateway to your courses of study, learning resources, and learning communities where you will interact with faculty and other students.

The learning resources in each course are specifically designed to support you as you develop competencies in preparation for your assessments. These learning resources may include reading materials, videos, tutorials, cohort opportunities, community discussions, and live discussions that are guided by course instructors who are experts in their field. You will access your program community during your orientation course to network with peers who are enrolled in your program and to receive continued support through professional enrichment and program-specific chats, blogs, and discussions. WGU also provides Student Services associates to help you and your program mentor solve any special problems that may arise.

Orientation

The WGU Orientation course will introduce you to the fundamentals of WGU's competency-based education (CBE) and the expectations, policies, and protocols for students enrolled in a WGU degree program. Orientation will introduce you to WGU's wide range of support resources and success centers. It also will provide you with study strategies recommended by current students and faculty that will help you succeed as a WGU student. Orientation ends with your first assessment at WGU, providing an opportunity to experience WGU's performance assessment process before you begin your degree-focused coursework. The Orientation course must be completed before you can start your first term at WGU.

Transferability of Prior College Coursework

Because WGU is a competency-based institution, it does not award degrees based on credits but rather on demonstration of competency. WGU undergraduate programs may accept transfer credits or apply a 'Requirement Satisfied' (RS) in some cases. Refer to your specific program transfer guidelines to determine what can be satisfied by previously earned college credits. Students entering graduate programs must have their undergraduate degree transcripts verified before being admitted to WGU. In addition to a program's standard course path, there may be additional state-specific requirements.

Click here for the Student Handbook

WGU does not waive any requirements based on a student's professional experience and does not perform a "résumé review" or "portfolio review" that will automatically waive any degree requirements. Degree requirements and transferability rules are subject to change in order to keep the degree content relevant and current.

Remember, WGU's competency-based approach lets you take advantage of your knowledge and skills, regardless of how you obtained them. Even when you do not directly receive credit, the knowledge you possess may help you accelerate the time it takes to complete your degree program.

Continuous Enrollment, On Time Progress, and Satisfactory Academic Progress

WGU is a "continuous enrollment" institution, which means you will be automatically enrolled in each of your new terms while you are at WGU. Each term is six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between terms that you would experience at a more traditional university. At the end of every six-month term, you and your program mentor will review the progress you have made and revise your Degree Plan for your next six-month term.

WGU requires that students make measurable progress toward the completion of their degree programs every term. We call this "On-Time Progress," denoting that you are on track and making progress toward on-time graduation. As full-time students, graduate students must enroll in at least 8 competency units each term, and undergraduate students must enroll in at least 12 competency units each term. Completing at least these minimum enrollments is essential to On-Time Progress and serves as a baseline from which you may accelerate your program. We measure your progress based on the courses you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass a course, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing a course means you have demonstrated competency equivalent to a "B" grade or better.

WGU assigns competency units to each course in order to track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some courses may be assigned 3 competency units while others may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important to students on financial aid because you must achieve SAP in order to maintain eligibility for financial aid. We will measure your SAP quantitatively

by reviewing the number of competency units you have completed each term. In order to remain in good academic standing, you must complete at least 66.67% of the units you attempt over the length of your program—including any courses you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least 3 competency units in order to remain eligible for financial aid. We know that SAP is complex, so please contact a financial aid counselor should you have additional questions.

Courses

Your Degree Plan includes courses needed to complete your program. To obtain your degree, you must demonstrate your skills and knowledge by completing each course's assessment(s). You may be asked to demonstrate competency in a course in several different ways, including proctored exams, projects, essays, research papers, and simulations, among others. Certifications verified through third parties may also be included in your program as a way to demonstrate competency. More detailed information about each assessment is provided in the course of study.

Learning Resources

WGU works with many different educational partners, including enterprises, publishers, training companies, and higher educational institutions, to provide high-quality and effective learning resources that match the competencies you are developing. These vary in type, and may be combined to create the best learning experience for your course. A learning resource can be an e-textbook, online module, study guide, simulation, virtual lab, tutorial, or a combination of these. The cost of most learning resources are included in your tuition and Resource Fee. They can be accessed or enrolled for through your courses. Some degree-specific resources may not be covered by your tuition, and you will need to cover those costs separately. WGU also provides a robust library to help you obtain additional learning resources, as needed.

Mobile Compatibility:

The following Student Handbook article provides additional details about the current state of mobile compatibility for learning resources at WGU.

Mobile Access for Learning Resources

Program Outcomes

The Program Outcomes are the following:

1. The graduate will be able to evaluate security of a given system design according to defined security goals.
2. The graduate will be able to mitigate security concerns related to network, cloud, cellular, mobile, and wireless technologies.
3. The graduate will be able to evaluate the effectiveness of an organization's cyber operations to protect and preserve data.
4. The graduate will be able to conduct digital forensics as part of an incident response plan.
5. The graduate will be able to create a risk management plan that includes disaster recovery and continuity plan for information systems within a given organization.
6. The graduate will be able to relate ethical principles and legal issues governing cyber operations within an organization.
7. The graduate applies core information technology skills in IT systems, operating systems, networking, security, scripting and programming, data management, and project management to support organizational functions.

In addition to program outcomes, graduates of the program will have the ability to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply security principles and practices to maintain operations in the presence of risks and threats.

Standard Path

As previously mentioned, competency units (CUs) have been assigned to each course in order to measure your academic progress. If you are an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. Graduate students are expected to enroll in a minimum of 8 competency units each term. A standard plan for a student for this program who entered WGU without any transfer units would look similar to the one on the following page. Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

Standard Path *for* Bachelor of Science, Cybersecurity and Information Assurance

Course Description	CUs	Term
Introduction to IT	4	1
Health, Fitness, and Wellness	4	1
IT Applications	4	1
Ethics in Technology	3	2
IT Foundations	4	2
Scripting and Programming - Foundations	3	2
Fundamentals of Information Security	3	2
Composition: Successful Self-Expression	3	3
Applied Probability and Statistics	3	3
Applied Algebra	3	3
Network and Security - Foundations	3	3
Networks	4	4
Critical Thinking: Reason and Evidence	3	4
Practical Applications of Prompt	2	4
Introduction to Communication: Connecting with Others	3	4
Network and Security - Applications	4	5
Discrete Math: Logic	1	5

American Politics and the US Constitution	3	5
Business of IT - Applications	4	5
Digital Forensics in Cybersecurity	4	6
Information Systems Security	4	6
Business of IT - Project Management	4	6
Legal Issues in Information Security	4	7
Discrete Math: Functions and Relations	1	7
Discrete Math: Algorithms and Cryptography	1	7
Introduction to Cryptography	4	7
Natural Science Lab	2	7
Data Management - Foundations	3	8
Data Analytics - Applications	4	8
Linux Foundations	3	8
Managing Information Security	3	8
Python for IT Automation	3	9
Software Security and Testing	3	9
Introduction to AI and Security	2	9
Cyber Defense and Countermeasures	4	9

Managing Cloud Security	4	10
Penetration Testing and Vulnerability Analysis	4	10
Cybersecurity and Information Assurance Capstone	4	10
Total CUs	122	

Changes to Curriculum

WGU publishes an Institutional Catalog, which describes the academic requirements of each degree program. Although students are required to complete the program version current at the time of their enrollment, WGU may modify requirements and course offerings within that version of the program to maintain the currency and relevance of WGU's competencies and programs. When program requirements are updated, students readmitting after withdrawal from the university will be expected to re-enter into the most current catalog version of the program.

Prerequisites

The standard path at WGU is essential for students to achieve success in their academic pursuits. By following the recommended sequence of courses, students pace their progress and build the necessary skills and competencies for future success. Prerequisite courses ensure that students have a comprehensive understanding of fundamental concepts and competencies necessary for completing advanced coursework.

The BSCSIA program requires students to complete a subset of courses in a specific sequence. Students and program mentors work together to plan the appropriate prerequisites for advanced courses and adhere to the standard path as recommended. Any exception to the prerequisite policy must be approved by faculty management.

The standard path is the recommended sequence for best success. The BSCSIA program requires that the following courses be taken as prerequisites to the next set of courses. Some courses may have additional prerequisites. Refer to specific course of study pages for more details.

(Prerequisite 1) Take this set of prerequisites before moving to the next section:

1. IT Applications
2. IT Foundations
3. Networks and Security – Foundations

(Prerequisite 2) Take this prerequisite before moving to the next section:

4. Networks

(Prerequisite 3) Take this prerequisite before moving to the next section:

5. Network and Security – Applications

(Prerequisite 4) Take this set of prerequisites before moving to the next section:

6. Digital Forensics in Cybersecurity
7. Information Systems Security
8. Introduction to Cryptography
9. Managing Information Security
10. Python for IT Automation

(Prerequisite 5) Take this set of prerequisites before moving to the next section:

11. Software Security and Testing
12. Introduction to AI and Security
13. Cyber Defense and Countermeasures
14. Managing Cloud Security

All prerequisites must be satisfied prior to taking the following course(s):

15. Penetration Testing and Vulnerability Analysis

Cybersecurity and Ethics

When considering a major in cybersecurity, students must understand the importance of ethics and principles such as integrity, responsibility, and respect for privacy. Ethical behavior helps prevent misuse of critical data and fosters trust with clients, employers, and the public. This trust is essential for effective collaboration and security measures. Ethical behavior also guides professionals in making decisions that comply with laws and regulations, preventing breaches, legal issues, or damage to an organization's reputation. Maintaining high ethical standards is key to building a secure and reliable digital environment.

While there are no WGU-specific criteria related to an applicant’s background for program participation, some

professional organizations like ISC2 require you to disclose any criminal history, association with criminal computer activity, or loss of license or certification during their application process. This may impact your ability to obtain specific certifications that align with WGU's standards of competency. Maintaining a clean legal record is important as it can affect your opportunities for certification and future employment opportunities in the field.

Cybersecurity is not a regulated profession; however, employers often require thorough background checks to ensure candidates have a history of integrity and reliability. Depending on the job, you might also need a security clearance, especially if you'll be working with sensitive government data. Obtaining a clearance involves a detailed review of your personal, financial, and criminal history. Any criminal records can impact your chances of getting these clearances.

Certifications

Certain courses are aligned to industry certifications:

- The courses IT Foundations and IT Applications are aligned to the CompTIA A+.
- The course Networks is aligned to the CompTIA Network+.
- The course Network and Security - Applications is aligned to the CompTIA Security+.
- The course Business of IT – Project Management is aligned to the CompTIA Project+.
- The course Cyber Defense and Countermeasures is aligned to the CompTIA CySA+.
- The course Penetration Testing and Vulnerability Analysis is aligned to the CompTIA Pentest+.
- The course Data Analytics – Applications is aligned to the CompTIA Data+
- The course Linux Foundations is aligned to the LPI Linux Essentials.
- The course Information Systems Security is aligned to the Systems Security Certified Practitioner (SSCP).
- The course Managing Cloud Security is aligned to the Certified Cloud Security Professional (CCSP).
- The course Business of IT – Applications is aligned to the ITIL®[1] Foundation Certification.

In addition to the listed certifications, CompTIA automatically awards stackable certification based on the achievement of earning various combinations. These include:

- CompTIA IT Operations Specialist
- CompTIA Secure Infrastructure Specialist
- CompTIA Security Analytics Professional
- CompTIA Network Vulnerability Assessment Professional
- CompTIA Network Security Professional

Notes on specific certifications:
The BSCSIA program requires a passing score on the ISC2 SSCP certification to earn their degree. Anyone with prior criminal history will not be prohibited from taking the test, but it may prevent one from obtaining their official SSCP Certification.

This certification also requires that students take the exam at a live, on-site, proctored testing center. Some testing centers may be located closer to well-populated cities. Students should note that testing centers set their own hours and are independent both of the third-party certification agencies and of WGU. It will be important for students to plan ahead so as to allow for proper lead time and consideration of testing center availability, location and hours of operation. Students will need to make their own personal arrangements to meet the testing center requirements to complete the exam.

[1] Subject to vendor availability. ITIL® is a registered trademark of AXELOS Limited, used under permission of AXELOS Limited. All rights reserved.

Areas of Study for Bachelor of Science, Cybersecurity and Information Assurance

The following section includes the areas of study in the program, with their associated courses. Your specific learning resources and level of instructional support will vary based on the individual competencies you bring to the program and your confidence in developing the knowledge, skills, and abilities required in each area of the degree. The Degree Plan and learning resources are dynamic, so you need to review your Degree Plan and seek the advice of your mentor regarding the resources before you purchase them.

IT Fundamentals

Introduction to IT

Introduction to IT examines information technology as a discipline and the various roles and functions of the IT department as business support. Students are presented with various IT disciplines, including systems and services, network and security, scripting and programming, data management, and business of IT, with a survey of technologies in every area and how they relate to each other and to the business.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner describes fundamental data management functions in databases.*
- *The learner describes the basics of programming languages in software development.*
- *The learner describes the role of the IT department in IT infrastructure management, disaster recovery, and business continuity processes.*
- *The learner describes the structure, function, and security associated with networks.*
- *The learner evaluates ethical concerns in information technology.*
- *The learner explains different computer hardware and networking technologies and their developments.*
- *The learner identifies components of software and its relation to operating systems.*
- *The learner identifies computer hardware components.*

IT Applications

IT Applications introduces skills in identifying operating systems and their configurations and in implementing security principles across devices and networks. Learners will also gain skills in troubleshooting software, security, and malware issues, and in implementing basic operational procedures in documentation, change management, compliance, and communication. The course will introduce basic disaster recovery and business continuity procedures, scripting basics, and remote access technology solutions. The course prepares learners for the CompTIA A+ Core 2 certification exam.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner identifies operating systems and their configurations.*
- *The learner identifies remote access technology solutions.*
- *The learner identifies scripting basics.*
- *The learner implements basic disaster recovery and business continuity procedures.*
- *The learner implements basic operational procedures in documentation, change management, compliance, and communication.*
- *The learner implements security principles across devices and networks.*
- *The learner troubleshoots software, security, and malware issues.*

IT Foundations

IT Foundations provides learners with an understanding of personal computer components and their functions in a desktop system; a knowledge of computer data storage and retrieval; and skills in classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security. This course also gives learners the ability to recommend appropriate tools, diagnostic procedures, preventative maintenance, and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and

reporting safety hazards and environmental or human accidents in technological environments; and effective communication skills for interacting with colleagues and clients, including job-related professional behavior. The course prepares learners for the CompTIA A+ Core 1 certification exam.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner configures common hardware and software components of mobile devices.*
- *The learner configures common hardware in computer systems.*
- *The learner configures wired and wireless networks.*
- *The learner creates client-side virtualization with cloud computing components.*
- *The learner troubleshoots hardware, software, and network issues with best practice methodologies.*

General Education

Health, Fitness, and Wellness

Health, Fitness, and Wellness focuses on the importance and foundations of good health and physical fitness—particularly for children and adolescents—addressing health, nutrition, fitness, and substance use and abuse.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate identifies factors that influence mental, emotional, and social wellness.*
- *The graduate identifies the application of the core competencies of social and emotional learning.*
- *The graduate identifies the influence of disease, fitness, and lifestyle on the body.*
- *The graduate identifies the principles of nutrition and the components of a healthy diet.*

Ethics in Technology

Ethics in Technology examines the ethical considerations of technology use in the 21st century and introduces students to a decision-making process informed by ethical frameworks. Students will study specific cases related to important topics such as surveillance, social media, hacking, data manipulation, plagiarism and piracy, artificial intelligence, responsible innovation, and the digital divide. This course has no prerequisites.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner describes ethical issues regarding data privacy, accuracy, access, and security.*
- *The learner explains professional ethical codes and their role in guiding professional behavior.*
- *The learner identifies interventions for personal bias and related legal concerns.*
- *The learner implements ethical decision-making frameworks in the information age.*

Composition: Successful Self-Expression

Welcome to Composition: Successful Self-Expression! In this course, you will focus on four main topics: professional writing for a cross-cultural audience, narrowing research topics and questions, researching for content to support a topic, and referencing research sources. Each section includes learning opportunities through readings, videos, audio, and other relevant resources. Assessment activities with feedback also provide opportunities to check your learning, practice, and show how well you understand course content. Because the course is self-paced, you may move through the material as quickly or as slowly as you need to gain proficiency in the seven competencies that will be covered in the final assessment. If you have no prior knowledge or experience, you can expect to spend 30-40 hours on the course content. You will demonstrate competency through a performance assessment. There is no prerequisite for this course and there is no specific technical knowledge needed.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner composes a written message with language appropriate for cross-cultural communication.*

- *The learner incorporates research to support a position or idea.*
- *The learner incorporates self-expression in written communication.*
- *The learner researches valid and reliable sources.*
- *The learner writes a message using an effective communication approach for a given situation.*
- *The learner writes a reference list.*
- *The learner writes in a professional manner for a given scenario.*

Applied Probability and Statistics

Applied Probability and Statistics is designed to help students develop competence in the fundamental concepts of basic statistics including: introductory algebra and graphing; descriptive statistics; regression and correlation; and probability. Statistical data and probability are often used in everyday life, science, business, information technology, and educational settings to make informed decisions about the validity of studies and the effect of data on decisions. This course discusses what constitutes sound research design and how to appropriately model phenomena using statistical data. Additionally, the content covers simple probability calculations, based on events that occur in the business and IT industries. No prerequisites are required for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate applies principles and methods of probability-based mathematics to explain and solve problems.*
- *The graduate applies the operations, processes, and procedures of basic algebra to evaluate quantitative expressions, and to solve equations and inequalities.*
- *The graduate applies the operations, processes, and procedures of fractions, decimals, and percentages to evaluate quantitative expressions.*
- *The graduate evaluates categorical and quantitative data pertaining to a single variable using appropriate graphical displays and numerical measures.*
- *The graduate evaluates the relationship between two quantitative variables through correlation and regression.*
- *The graduate evaluates the relationship between two variables through interpretation of visual displays and numerical measures.*

Applied Algebra

Applied Algebra is designed to help you develop competence in working with functions, the algebra of functions, and using some applied properties of functions. You will start learning about how we can apply different kinds of functions to relevant, real-life examples. From there, the algebra of several families of functions will be explored, including linear, polynomial, exponential, and logistic functions. You will also learn about relevant, applicable mathematical properties of each family of functions, including rate of change, concavity, maximizing/minimizing, and asymptotes. These properties will be used to solve problems related to your major and make sense of everyday living problems. Students should complete Applied Probability and Statistics or its equivalent prior to engaging in Applied Algebra.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner analyzes graphical depictions of real-world situations using functional properties.*
- *The learner applies exponential functions and their properties to real-world problems.*
- *The learner applies linear functions and their properties to real-world problems.*
- *The learner applies logistic functions and their properties to real-world problems.*
- *The learner applies polynomial functions and their properties to real-world problems.*
- *The learner interprets the real-world meaning of various functions based on notation, graphical representations, and data representations.*
- *The learner verifies the validity of a given model.*

Critical Thinking: Reason and Evidence

In this course you will learn key critical thinking concepts and how to apply them in the analysis and evaluation of reasons and evidence. The course examines the basic components of an argument, the credibility of evidence sources, the impact of bias, and how to construct an argument that provides good support for a claim. The course consists of an introduction and four major sections. Each section includes learning opportunities through readings, videos, audio, and other relevant resources. Assessment activities with feedback also provide opportunities to check your learning, practice, and show how well you understand course content. Because the course is self-paced, you may move through the material as quickly or as slowly as you need to gain proficiency in the four competencies that will be covered in the final assessment. If you have no prior knowledge or experience, you can expect to spend 30-40 hours on the course content.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner evaluates bias and its impact.*
- *The learner evaluates evidence based on source credibility.*
- *The learner evaluates the quality of an argument.*
- *The learner makes claims based on evidence.*

Introduction to Communication: Connecting with Others

Welcome to Introduction to Communication: Connecting with Others! It may seem like common knowledge that communication skills are important, and that communicating with others is inescapable in our everyday lives. While this may appear simplistic, the study of communication is actually complex, dynamic, and multifaceted. Strong communication skills are invaluable to strengthening a multitude of aspects of life. Specifically, this course will focus on communication in the professional setting, and present material from multiple vantage points, including communicating with others in a variety of contexts, across situations, and with diverse populations. Upon completion, you will have a deeper understanding of both your own and others' communication behaviors, and a toolbox of effective behaviors to enhance your experience in the workplace.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner implements appropriate communication styles based on audience and setting.*
- *The learner uses communication strategies for managing conflict.*
- *The learner uses communication strategies to influence others.*

Discrete Math: Logic

Discrete Math-Logic is designed to help students develop competence in the use of logic and proofs and Boolean Algebra and Boolean functions. Applied Probability and Statistics and Applied Algebra are prerequisites for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner evaluates the truth of statements using proofs and the principles of deductive logic.*
- *The learner minimizes circuits using Boolean algebra and Boolean functions.*

American Politics and the US Constitution

American Politics and the U.S. Constitution examines the evolution of representative government in the United States and the changing interpretations of the civil rights and civil liberties protected by the Constitution. This course will give candidates an understanding of the powers of the branches of the federal government, the continual tensions inherent in a federal system, the shifting relationship between state and federal governments, and the interactions between elected officials and the ever-changing electorate. This course will focus on such topics as the role of a free press in a democracy, the impact of changing demographics on American politics, and the debates over and expansion of civil rights. Upon completion of the course, candidates should be able to explain the basic functions of the federal government, describe the forces that shape American policy and politics, and be better prepared to participate in America's civic institutions. This course has no prerequisite.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate describes the influence of competing political ideologies on the development of the United States government.*
- *The graduate examines the influence of political parties, citizens, and non-governmental organizations on elections and other political processes inside a participatory democracy.*
- *The graduate examines the influence of the media, public opinion, and political discourse on American democracy.*
- *The graduate examines the struggle to balance individual liberty, public order, and state's rights.*
- *The graduate explains how the structure and powers of the United States government interact to form public policy.*

Discrete Math: Functions and Relations

Discrete Math: Functions and Relations is designed to help students develop competence in the use of abstract discrete structures fundamental to systems networking. In particular, this course will introduce students to set theory, finite sequences, series, and relations. Discrete Math: Logic, Applied Probability and Statistics, and Applied Algebra are prerequisites for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner analyzes mathematical problems using relations and directed graphs.*
- *The learner analyzes relationships between sets and functions.*

Discrete Math: Algorithms and Cryptography

Discrete Math: Algorithms and Cryptography addresses discrete computational methods, including searching and sorting algorithms, big-O estimates, and number theory and cryptography. Discrete Math Functions and Relations is a prerequisite for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner analyzes linear algorithms and associated big-O estimates.*
- *The learner analyzes the use of number theory in cryptography.*

Natural Science Lab

This course provides students an introduction to using the scientific method and engaging in scientific research to reach conclusions about the natural world. Students will design and carry out an experiment to investigate a hypothesis by gathering quantitative data. They will also research a specific ecosystem using academic sources and draw conclusions from their findings.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate accurately executes the process of scientific inquiry through experimentation in the natural world.*
- *The graduate draws conclusions based on academic research and scientific inquiry.*
- *The graduate evaluates academic sources for their credibility and relevance to a chosen research topic on a natural world phenomenon.*
-

Scripting and Programming

Scripting and Programming - Foundations

Scripting and Programming - Foundations introduces programming basics such as variables, data types, flow control, and design concepts. The course is language-agnostic in nature, ending in a survey of languages, and introduces the distinction between interpreted and compiled languages. Learners will gain skills in identifying scripts for computer program requirements and in using fundamental programming elements as part of common computer programming tasks. Learners will also gain an understanding of the logic and outcome of simple algorithms.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner explains the logic and outcome of simple algorithms.*
- *The learner identifies scripts for computer program requirements.*
- *The learner uses fundamental programming elements as part of common computer programming tasks.*

Secure Systems Analysis & Design

Fundamentals of Information Security

Fundamentals of Information Security lays the foundation for understanding terminology, principles, processes, and best practices of information security at local and global levels. It further provides an overview of basic security vulnerabilities and countermeasures for protecting information assets through planning and administrative controls within an organization.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner explains how human, organizational, and societal factors impact cybersecurity.*
- *The learner identifies the threats, principles, standards, and industry best practices related to connection and system security.*
- *The learner identifies the threats, principles, standards, and industry best practices related to data security.*
- *The learner identifies the threats, principles, standards, and industry best practices related to software and component security.*

Information Systems Security

IT security professionals must be prepared for the operational demands and responsibilities of security practitioners including authentication, security testing, intrusion detection and prevention, incident response and recovery, attacks and countermeasures, cryptography, and malicious code countermeasures. This course provides a comprehensive, up-to-date global body of knowledge that ensures students have the right information, security knowledge, and skills to be successful in IT operational roles to mitigate security concerns and guard against the impact of malicious activity. Students demonstrate how to manage and restrict access control systems; administer policies, procedures, and guidelines that are ethical and compliant with laws and regulations; implement risk management and incident handling processes; execute cryptographic systems to protect data; manage network security; and analyze common attack vectors and countermeasures to assure information integrity and confidentiality in various systems. This course prepares students for the Systems Security Certified Practitioner (ISC2 SSCP) certification exam.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The graduate defends the security of a network by maintaining the confidentiality, integrity, and availability (CIA) of the information transmitted over communication networks.*
- *The graduate evaluates cryptographic systems and operations to protect data security.*
- *The graduate evaluates security concerns with countermeasures to guard against the impact of malicious activity to end-point device security, virtualization, cloud, and large-scale distributed systems.*
- *The graduate evaluates security incident handling plans to protect and preserve organization assets and data.*
- *The graduate evaluates security operations concepts, and policies to ensure the confidentiality, integrity, and availability of information assets is applied.*
- *The graduate manages control access to privileged, confidential, or proprietary resources.*
- *The graduate proposes security risks mitigations processes to identify, evaluate, prioritize, and prevent potential security threats.*

Network and Security

Network and Security - Foundations

Network and Security - Foundations introduces learners to the basic network systems and concepts related to networking technologies. Learners will gain skills in applying network security concepts for business continuity, data access, and confidentiality, and in identifying solutions for compliance with security guidance.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner applies network security concepts for business continuity, data access, and confidentiality.*
- *The learner identifies basic network systems and concepts related to networking technologies.*
- *The learner identifies solutions for compliance with security guidance.*

Network and Security - Applications

Network and Security - Applications prepares learners for the CompTIA Security+ certification exam. The course introduces learners to skills in identifying threats, attacks, and vulnerabilities to organizational security. The learner will also gain skills in designing security solutions for enterprise infrastructures and architectures, as well as in implementing security solutions across hardware, applications, and network services. Learners will be able to execute operations and incident response with tools, policies, forensics, and mitigation techniques, and to analyze information security controls, governance, risk, and compliance.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner analyzes information security controls, governance, risk, and compliance.*
- *The learner designs security solutions for enterprise infrastructures and architectures.*
- *The learner executes operations and incident response with tools, policies, forensics, and mitigation techniques.*
- *The learner identifies threats, attacks, and vulnerabilities to organizational security.*
- *The learner implements security solutions across hardware, applications, and network services.*

Networks

Networks

Networks introduces skills in configuring networking components and a network infrastructure. Learners will gain skills in optimizing network operations for availability, performance, and security, and in troubleshooting network issues. The course prepares learners for the CompTIA Network+ certification exam. Network and Security - Foundations is a prerequisite for this course.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner configures a network infrastructure.*
- *The learner configures networking components.*
- *The learner implements network security techniques.*
- *The learner optimizes network operations for availability, performance, and security.*
- *The learner troubleshoots network issues.*

Computer Science

Practical Applications of Prompt

The Practical Applications of Prompt course introduces learners to generative artificial intelligence (AI). This course aims to allow learners to gain skills for writing effective prompts and develop more effective conversations with artificial intelligence. Practical Applications of Prompt will lead learners to explore why prompt engineering is necessary. The course also aims to help learners, regardless of background, increase prompt fluency, which is fluency in using prompt effectively. The course teaches learners how to create effective prompts to elicit information with consideration of scope, specificity, and context; additionally, it teaches learners to evaluate the medium of the prompt and adjust prompts to output relevant

results. The last section of the course focuses on ways to evaluate the efficacy of prompts and improve the depth and quality of analytical investigations. This approach prepares students to navigate the complexities of working with generative AI and use these skills effectively throughout their careers.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *Learners create effective prompts with the consideration of scope, specificity, and context to elicit targeted information.*
- *Learners evaluate the efficacy of writing different prompts on research outcomes and improve the depth and quality of their analytical investigations.*
- *Learners evaluate the images, texts, and sound of the prompt and adjust prompts to output relevant results.*
- *Learners explain why prompt engineering is necessary.*

Business of IT

Business of IT - Applications

Business of IT - Applications examines Information Technology Infrastructure Library (ITIL®) terminology, structure, policies, and concepts. Focusing on the management of information technology (IT) infrastructure, development, and operations, learners will explore the core principles of ITIL practices for service management to prepare them for careers as IT professionals, business managers, and business process owners. This course has no prerequisites.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner applies Information Technology Infrastructure Library (ITIL) concepts, core components, principles, and models of service management.*
- *The learner applies the Information Technology Infrastructure Library (ITIL) six activities of the service value chain.*

Business of IT - Project Management

In this course, students will build on industry standard concepts, techniques, and processes to develop a comprehensive foundation for project management activities. During a project's life cycle, students will develop the critical skills necessary to initiate, plan, execute, monitor, control, and close a project. Students will apply best practices in areas such as scope management, resource allocation, project planning, project scheduling, quality control, risk management, performance measurement, and project reporting. This course prepares students for the following certification exam: CompTIA Project+.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner applies communication methods and change control processes within a project.*
- *The learner determines requirements of a project management plan.*
- *The learner identifies project factors, constraints, and risk strategies.*

Digital Forensics and Incident Response

Digital Forensics in Cybersecurity

Digital Forensics in Cybersecurity examines the specialized field of digital forensics within the context of computer security. This course focuses on the techniques, tools, and processes used to investigate cybercrimes and security breaches, analyzing digital evidence to report findings in preparation for a possible legal action. It bridges the gap between theoretical knowledge and practical skills, preparing students to tackle real-world security challenges through the lens of digital forensics.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner analyzes gathered evidence with forensic tools in alignment with investigation processes.*
- *The learner collects forensic evidence from deleted files and artifacts.*
- *The learner creates incident reports communicating the conclusions of a forensic investigation to organizational stakeholders.*

- *The learner identifies laws, rules, standards, policies, and best practices related to digital forensics.*

Ethics & Cyber Law

Legal Issues in Information Security

Legal Issues in Information Security provides students with exposure to the laws and ethical issues of cybersecurity and the importance of compliance. Students explore the fundamental standards, frameworks, and best practices of data privacy and data privacy protection. Students analyze legal requirements and best practices for protecting organizations from security incidents and understand the training and education necessary for creating employee awareness.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together*
- *The learner analyzes applicable regional, national, international, and industry legal requirements and system security best practices to proactively protect an organization against security incidents.*
- *The learner discusses the implications of ethical issues for specific cybersecurity actions within an organization.*
- *The learner explains the fundamental standards, frameworks, and practices of data privacy and data privacy protection.*
- *The learner outlines a security awareness training and education (SATE) program to raise employee awareness on relevant cybersecurity legislation.*

Information Assurance

Introduction to Cryptography

Introduction to Cryptography introduces students to foundational cryptography concepts and explore implementing encryption methods with symmetric and asymmetric algorithms. Students analyze principles and operations of cryptographic algorithms and protocols in secure systems. Students use cryptography frameworks and standards in alignment with organizational and information security guidelines.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner analyzes principles and operations of cryptographic algorithms and protocols to enhance an organization's ability to design and evaluate secure systems.*
- *The learner explains foundational cryptography concepts and the elements of a cryptographic system.*
- *The learner explains how cryptography frameworks inform alignment of organizational and information security guidelines.*
- *The learner implements encryption methods with symmetric and asymmetric algorithms.*

Data Management

Data Management - Foundations

Data Management Foundations offers an introduction in creating conceptual, logical and physical data models. Students gain skills in creating databases and tables in SQL-enabled database management systems, as well as skills in normalizing databases. No prerequisites are required for this course

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner defines primary and foreign keys in data normalization.*
- *The learner determines how to run queries for creation and manipulation of data in relational databases.*
- *The learner explains attributes of databases, database tables, and structured and associated query language (SQL) commands.*

Data Science

Data Analytics - Applications

Data Analytics Applications covers advanced concepts across the various phases of the data product lifecycle. You will learn to choose and apply appropriate techniques for data management and data manipulation, statistical analysis, visualization, and data governance concepts to satisfy business needs.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner applies appropriate data acquisition and manipulation techniques to address businesses' data requirements for*

analysis.

- *The learner applies basic concepts to analyze data types and data structures.*
- *The learner applies data analysis techniques and tools to address a business need.*
- *The learner applies data management concepts to ensure the accuracy and quality of data.*
- *The learner applies data visualization techniques to communicate a business need.*
- *The learner selects the data visualization technique to communicate a business requirement.*

Operating Systems

Linux Foundations

Linux Foundations prepares learners for the LPI Linux Essentials certification, and is an introduction to Linux as an operating system as well as an introduction to open-source concepts and the basics of the Linux command line. Learners will gain skills in identifying the fundamentals of open-source software and to develop resources for data access and security.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner develops resources for data access and security.*
- *The learner identifies the fundamentals of open-source software.*

Risk Management

Managing Information Security

Managing Information Security provides an in-depth analysis of the relationship between an information security program and broader business goals and objectives. Students apply best practices including information security governance frameworks, compliance requirements, and security strategies to minimize risk to an organization.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner develops security incident response plans that align to an organization's security goals and objectives and maintain business continuity.*
- *The learner recommends changes to established security management programs in response to a cyber-related incident on an organization.*
- *The learner recommends modifications to established information security governance to increase information assurance levels within an organization.*
- *The learner recommends risk mitigation strategies relevant to an organization's information security program.*
- *The learner recommends strategies for meeting regulatory compliance within an organization.*

Networking

Python for IT Automation

Python for IT Automation covers the fundamentals of the Python language and its features to control program flow, inform decisions, and automate IT tasks and processes. The course emphasizes a systematic approach to solving problems and the application of programming logic to administer secure, scalable, and resilient IT networks and systems.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner applies Python principles and syntax to manage variables, data structures, and operators and to perform IT tasks.*
- *The learner creates Python scripts using control structures to automate system tasks.*
- *The learner integrates Python scripts, modules, packages, and libraries to automate networking tasks and processes.*

Software

Software Security and Testing

This course prepares you to recognize security vulnerabilities in software, to plan interventions to address security vulnerabilities where they exist, and to develop and test these interventions. The course covers topics in Web security, permissions, and identity security; debugging; log file analysis; API security; and encryption and cryptography concepts.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner configures security authentication for representational state transfer (REST) and application programming interfaces (APIs).*
- *The learner develops mitigation solutions for security vulnerabilities.*
- *The learner evaluates application and network logs for performance, availability, and security vulnerabilities.*

Artificial Intelligence

Introduction to AI and Security

Introduction to AI and Security provides an overview of critical terminology and key concepts for artificial intelligence (AI). Students explore the history, development, and evolution of AI along with its limitations and ethical issues. Students further explore best practices for securing AI within professional environments. Contextualized examples offer students an opportunity explore how AI is used in security operations.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner describes the types of artificial intelligence for decision-making in real-world applications.*
- *The learner explains best practices for managing secure AI systems within an organization.*
- *The learner explains how the collection, wrangling, and cleaning of data impacts AI/ML models.*

Hacking Countermeasures and Techniques

Cyber Defense and Countermeasures

Traditional defenses—such as firewalls, security protocols, and encryption—sometimes fail to stop attackers determined to access and compromise data. This course provides the fundamental skills to handle and respond to computer security incidents in an information system. The course addresses various underlying principles and techniques for detecting and responding to current and emerging computer security threats. Students learn how to leverage intelligence and threat detection techniques; analyze and interpret data; identify and address vulnerabilities; suggest preventative measures; effectively respond to and recover from incidents; and handle various types of incidents, risk assessment methodologies, and various laws and policies related to incident handling. This course prepares students for the CompTIA Cybersecurity Analyst (CySA+) certification exam. The following courses are prerequisites: Networks and Network and Security – Applications.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner applies controls and procedures for software and system security.*
- *The learner applies improvement techniques and automation based on system monitoring and threat hunting.*
- *The learner applies incident response procedures based on digital forensic analysis.*
- *The learner applies security concepts to risk mitigation with regards to privacy and protection.*
- *The learner manages security testing and response in defense of organizational threats and vulnerabilities.*

Web and Cloud Security

Managing Cloud Security

Managing Cloud Security prepares learners to safeguard cloud data with identity and access management and to implement secure solutions in cloud service models. Learners will be introduced to skills in identifying security policies and procedures for cloud applications and in implementing operational capabilities, procedures, and training in relation to organizational needs. Learners will also gain skills in conducting risk analysis and risk management in alignment with disaster recovery and business continuity plans and in identifying legal, compliance, and ethical concerns.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner conducts risk analysis and risk management in alignment with disaster recovery and business continuity plans.*
- *The learner identifies legal, compliance, and ethical concerns within a cloud environment.*

- *The learner identifies security policies and procedures for cloud applications.*
- *The learner implements operational capabilities, procedures, and training in relation to organizational needs.*
- *The learner implements secure solutions in cloud service models.*
- *The learner safeguards cloud data with identity and access management.*

Penetration Testing

Penetration Testing and Vulnerability Analysis

Penetration Testing and Vulnerability Analysis introduces learners to the skills necessary to perform penetration testing and vulnerability management within an organization. Learners will gain skills in defining the scope and planning for procurement of penetration testing engagements and in performing cyber reconnaissance for information gathering and vulnerability identification. Learners will also gain skills in developing penetration testing techniques in exploitation of physical, digital, and social vulnerabilities, and to simulate attacks and responses on an organization's security infrastructure. Lastly, learners will gain skills in reporting the results of cybersecurity assessments with recommended actions.

This course covers the following competencies:

- *Begin your course by discussing your course planning tool report with your instructor and creating your personalized course plan together.*
- *The learner defines the scope and planning for procurement of penetration testing engagements.*
- *The learner develops penetration testing techniques in exploitation of physical, digital, and social vulnerabilities.*
- *The learner performs cyber reconnaissance techniques for information gathering and vulnerability identification.*
- *The learner reports the results of cybersecurity assessments with recommended actions.*
- *The learner simulates attacks and responses on an organization's security infrastructure.*

Capstone

Cybersecurity and Information Assurance Capstone

Cybersecurity and Information Assurance Capstone’s project allows students to demonstrate their competency in implementing a cybersecurity solution. Expanding on the cybersecurity competencies gained throughout the program, students create a proposal for an information security solution aimed at convincing stakeholders to implement the project. Students provide an executive summary and ultimately create a technical report that utilizes feedback from their peers. Artifacts are evaluated by peer team members prior to submission, and students practice giving, receiving, and integrating feedback into their work process.

This course covers the following competencies:

- *The learner creates a project proposal to convince stakeholders to implement the security solution.*
- *The learner creates a technical report for a fully functional system to solve real-world scenarios.*
- *The learner creates an executive summary of a security solution directed to IT and business professionals.*

Accessibility and Accommodations

Western Governors University (WGU) is committed to providing equal access to its academic programs to all qualified students. WGU's Student Disability Services department supports this mission by providing support, resources, advocacy, collaboration, and academic accommodations in accordance with federal and state statutes and regulations to WGU students and prospective students. Potential and current students needing to request accommodation(s) are encouraged to contact Student Disability Services to initiate the request. To initiate the accommodation process, all potential and current WGU students must complete the secure online Accommodation Request Form located at' *https://www.wgu.edu/wgu/ada_form*. Potential and current students can reach the Student Disability Services team Monday through Friday 8:00 a.m. to 5:00 p.m. MT at 1-877- 435-7948 x5922 or at *sds@wgu.edu*. Additional information on accommodations can be found in the student handbook Accommodations for Students with Disabilities policy.

Need More Information? WGU Student Services

Student Support Services team members also assist with unresolved concerns to find equitable resolutions. To contact the Student Support Services team, please feel free to call 877-435-7948 or e-mail *studentservices@wgu.edu*. We are available Monday through Friday from 6:00 a.m. to 10:00 p.m., and Saturday and Sunday, 10:00 a.m. to 7:00 p.m, mountain standard time.