



Program Guidebook

Certificate: Network and Cyber Defense Foundations

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The Network and Cyber Defense Foundations Certificate signifies that learners have achieved competency in foundational skills related to cyber security and networks.

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 your enrollment, you will be assigned a program mentor—an expert in your field of study who will provide you with regular program-level guidance and support from the day you start until the day you graduate. Your program mentor will set up regular telephone appointments (weekly at first) with you, which you will be expected to keep. The mentor will review program competencies with you and work with you to develop a plan and schedule for your coursework. Your program mentor will serve as your main point of contact throughout your program—helping you set weekly study goals, recommending specific learning materials, telling you what to expect in courses, and keeping you motivated. In addition to regular calls, your program mentor is available to help you resolve questions and concerns as they arise.

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 “passes,” these evaluators, who review your work anonymously, will provide you with instructional feedback to help you meet evaluation standards 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. *Please note: The Endorsement Preparation Program in Educational Leadership is not eligible for federal financial aid.

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](#)

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* Certificate: Network and Cyber Defense Foundations

Course Description	CUs	Term
Introduction to IT	4	1
Network and Security - Foundations	3	1
Scripting and Programming - Foundations	3	1
Fundamentals of Information Security	3	1
Linux Foundations	3	2
Digital Forensics in Cybersecurity	4	2
Total CUs	20	

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.

Areas of Study for Certificate: Network and Cyber Defense Foundations

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.*

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.*

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.*

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.*

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.*

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.