



# Program Guidebook

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## Bachelor of Science, Information Technology

*The WGU Bachelor of Science in Information Technology (IT) program provides a solid foundation in computer information systems and technologies. In addition to the IT content, the degree program includes a broad collegiate-level education. The program is primarily designed for those seeking a career or to advance their current career as information technology professionals by developing levels of expertise required for increased responsibility in the information technology field. The foundation of the Bachelor of Science program consists of six domains of study: systems and services, networking and security, scripting and programming, data management, business of IT, and web development. At the end of the program, students develop a comprehensive portfolio and complete a capstone project.*



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

The WGU orientation course focuses on acquainting you with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will also utilize WGU program and course communities, participate in activities, and get to know other students at WGU. 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. However, if you have completed college coursework at another accredited institution, or if you have completed industry certifications, you may have your transcripts and certifications evaluated to determine if you are eligible to receive some transfer credit. The guidelines for determining what credits will be granted varies based on the degree program. Students entering graduate programs must have their undergraduate degree verified before being admitted to WGU. To review more information in regards to transfer guidelines based on the different degree programs, you may visit the Student Handbook found at the link below and search for "Transfer Credit Evaluation."

[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



## Standard Path for Bachelor of Science, Information Technology

Course Description	CUs	Term
Critical Thinking: Reason and Evidence	3	1
Introduction to IT	4	1
Global Arts and Humanities	3	1
Integrated Physical Sciences	3	1
Principles of Management	4	2
Business of IT – Applications	4	2
Composition: Writing with a Strategy	3	2
Introduction to Communication: Connecting with Others	3	2
Network and Security - Foundations	3	3
Composition: Successful Self-Expression	3	3
Applied Probability and Statistics	3	3
IT Applications	4	3
Organizational Behavior and Leadership	3	4
Spreadsheets	3	4
IT Foundations	4	4
Finite Mathematics	4	4
Introduction to Physical and Human Geography	3	5
Scripting and Programming - Foundations	3	5
Applied Algebra	3	5
Web Development Foundations	3	5
Web Development Applications	6	6
User Interface Design	4	6
American Politics and the US Constitution	3	6
Information Systems Management	3	6
Natural Science Lab	2	7
Business of IT - Project Management	4	7
Ethics in Technology	3	7
Data Management - Foundations	3	7
Data Management – Applications	4	8
Cloud Foundations	3	8
Emerging Technologies	2	8
Networks	4	8
Technical Communication	3	9
Network and Security - Applications	4	9
Linux Foundations	3	9

Course Description	CUs	Term
IT Capstone Written Project	4	9

## 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.

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covered in the final assessment. If you have no prior knowledge of this material, 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 analyzes the message of a data visualization for a specific purpose.*

*The learner interprets complex global systems through the lenses of physical and human geography.*

*The learner analyzes the various causes and effects of human migration.*

*The learner analyzes the connections among the various factors contributing to climate change.*

*The learner applies logical reasoning to the analysis of climate change.*

## **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 graduate interprets the real-world meaning of various functions based on notation, graphical representations, and data representations.*

*The graduate applies linear functions and their properties to real-world problems.*

## **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 evaluates academic sources for their credibility and relevance*

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*course plan together.*

*The learner explains different computer hardware and networking technologies and their developments.*

*The learner describes fundamental data management functions in databases.*

*The learner identifies components of software and its relation to operating systems.*

*The learner identifies computer hardware components.*

*The learner describes the structure, function, and security associated with networks.*

*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 evaluates ethical concerns in information technology.*

## **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.*

## Information Systems Management

Information Systems Management provides an overview of many facets of information systems applicable to business. The course explores the importance of viewing information technology (IT) as an organizational resource that must be managed, so that it supports or enables organizational strategy.

*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 role of information systems and the challenges of managing information technology in supporting essential business functions.*

*The graduate describes the characteristics, functions, and evolution of computer hardware and software in support of business functions.*

*The graduate describes effective techniques for managing databases and data warehouses for business optimization.*

*The graduate describes primary technologies and the application of telecommunications, wireless, and the internet in business.*

*The graduate describes effective strategies for systems development and the use of various decision support tools in business.*

*The graduate interprets approaches for managing information security and privacy, averting ethical issues, and minimizing negative societal effects in business.*

*The graduate describes the impact of e-commerce and social media on the business environment.*

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## Business Core

### Principles of Management

Principles of Management provides students with an introductory look at the discipline of management and its context within the business environment. Students of this course build on previously mastered competencies by taking a more in-depth look at management as a discipline and how it differs from leadership while further exploring the importance of communication within business. This course provides students with a business generalist overview in the areas of strategic decision-making and operational planning, managerial budgeting, change management, human capital management, staff development, and conflict management.

*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 can explain the strategic planning process.*

*The graduate can describe how to establish a total quality management program in a product operation and in a service operation.*

*The graduate can describe how to establish and promote an emphasis within an organization.*

*The graduate can demonstrate effective techniques for managing conflict and change.*

*The graduate can respond appropriately to moral issues in the workplace.*

**Business Core MIT**

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*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 determines requirements of a project management plan.*

*The learner identifies project factors, constraints, and risk strategies.*

*The learner applies communication methods and change control processes within a project.*

## **Network and Security**

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### **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 identifies basic network systems and concepts related to networking technologies.*

*The learner applies network security concepts for business continuity, data access, and confidentiality.*

*The learner identifies solutions for compliance with security guidance.*

### **Emerging Technologies**

The Emerging Technologies course examines emerging technologies, identifies the benefits and drawbacks of technology adoption, and provides students with a process to evaluate technologies. The course will examine three technologies that may have an impact on Information Technology services in the coming years.

*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 evaluates technology for organizations improvement.*

*The graduate determines the impact of a proposed technology on an organization.*

### **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 identifies threats, attacks, and vulnerabilities to organizational security.*

*The learner designs security solutions for enterprise infrastructures and architectures.*

*The learner implements security solutions across hardware, applications, and network services.*

*The learner executes operations and incident response with tools, policies, forensics, and mitigation techniques.*

*The learner analyzes information security controls, governance, risk, and compliance.*

## Leadership and Management Specialty

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### Organizational Behavior and Leadership

Organizational Behavior and Leadership explores how to lead and manage effectively in diverse business environments. The course requires students to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems.

*This course covers the following competencies:*

*The graduate can describe the effects of specified influences on individual behavior.*

*The graduate can recommend appropriate principles or techniques for guiding the development of a group.*

*The graduate can determine which type of team and team leadership should be used to accomplish a task or project.*

*The graduate analyzes the culture within an organization to determine how to work effectively within that organization.*

*The graduate can analyze leadership theories, methods, and tools in given situations and select the appropriate behavior of the leader.*

*The graduate can develop and recommend how to implement effective performance evaluation processes.*

## Spreadsheets

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### Spreadsheets

The Spreadsheets course will help students become proficient in using spreadsheets to analyze business problems. Students will demonstrate competency in spreadsheet development and analysis for business/accounting applications (e.g., using essential spreadsheet functions, formulas, charts, etc.)

*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 creates functional, formatted spreadsheets using appropriate spreadsheet functions and formulas to solve business problems.*

*The graduate creates charts to present spreadsheet data for use in a professional setting.*

*The graduate demonstrates proficiency in using spreadsheet software to analyze business problems.*

## Scripting and Programming

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### 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 identifies scripts for computer program requirements.*

*The learner uses fundamental programming elements as part of common computer programming tasks.*

*The learner explains the logic and outcome of simple algorithms.*



# Web Development

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## Web Development Foundations

Web Development Foundations introduces students to web design and development using HTML, XML, and Cascading Style Sheets (CSS), the foundational languages of the web. This course also covers how to troubleshoot problems using developer tools and integrated development environments commonly employed in web development. There are no prerequisites for this course.

*This course covers the following competencies:*

*The graduate creates a navigation hierarchy for a website.*

*The graduate analyzes best practices in designing interactive elements of User Interfaces.*

*The graduate explains the best practice strategies for maintaining websites, including Search Engine Optimization.*

## **Data Management**

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### **Data Management - Foundations**

Data Management - Foundations introduces learners to the concepts and terminology used in the field of data management. Students will be introduced to Structured Query Language (SQL) and will learn how to use Data Definition Language (DDL) and Data Manipulation Language (DML) commands to define, retrieve, and manipulate data. This course covers differentiations of data—structured vs. unstructured and quasi-structured (relational, hierarchical, XML, textual, visual, etc). It also covers aspects of data management (quality, policy, storage methodologies). Foundational concepts of data security are included.

*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 attributes of databases, database tables, and structured and associated query language (SQL)*

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# Networks

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## 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 networking components.*

*The learner configures a network infrastructure.*

*The learner optimizes network operations for availability, performance, and security.*

*The learner troubleshoots network issues.*

*The learner implements network security techniques.*

# Operating Systems

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## 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 identifies the fundamentals of open-source software.*

*The learner develops resources for data access and security.*

# Capstone

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## IT Capstone Written Project

The capstone project consists of a technical work proposal, the proposal's implementation, and a post-implementation report that describes the graduate's experience in developing and implementing the capstone project. The capstone project should be presented and approved by the course instructor in relation to the graduate's technical emphasis.

*This course covers the following competencies:*

*The graduate integrates and synthesizes competencies from across the degree program, thereby demonstrating the ability to participate in and contribute value to the chosen professional field.*

## **Accessibility and Accommodations**

Western Governors University is committed to providing equal access to its academic programs to all qualified students. WGU's Accessibility Services team supports this mission by providing support, resources, advocacy, collaboration, and academic accommodations for students with disabilities and other qualifying conditions under the Americans with Disabilities Act (ADA). WGU encourages student to complete the Accommodation Request Form as soon as they become aware of the need for an accommodation. Current and prospective students can reach the