



## Program Guidebook

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### Associate of Science, Data Analytics

*The A.S. in Data Analytics is designed to prepare data analytics technical and business professionals with change management, design thinking, and systems thinking skills, who can set up a database environment, design databases, acquire data, wrangle it, analyze it, and communicate effectively to different audiences as part of the decision-making process.*

## Understanding the Competency-Based Approach

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

Progress through a degree program is governed not by the amount of time you spend in class but by your ability to demonstrate mastery of competencies as you complete required courses. Of course, you will need to engage in learning experiences as you review competencies or develop knowledge and skills in areas in which you may be weak. To help you acquire the knowledge and skills you need to 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 the competencies required for your program and to help you create a schedule for completing your courses. You will also work closely with course instructors as you engage in each of your courses. As subject matter experts, course instructors will guide you through the content you must master to pass 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 that you possess and can demonstrate—not the number of credits hours on your transcript.

## Accreditation

Western Governors University is the only university in the history of American higher education to have earned accreditation from four regional accrediting commissions. WGU's accreditation was awarded by (1) the Northwest Commission on Colleges and Universities, (2) the Higher Learning Commission of the North Central Association of Colleges and Schools, (3) the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, and (4) the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges. The university's accreditation status is now managed by the Northwest Commission on Colleges and Universities (NWCCU), which reaffirmed WGU's accreditation in February 2020. The WGU Teachers College is accredited at the initial-licensure level by the Council for the Accreditation of Educator Preparation (CAEP) and by the Association for Advancing Quality in Educator Preparation (AAQEP). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Information Management program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). The College of Business programs are accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

## 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.

You will also be assigned to a course instructor for each course. Course instructors are subject matter experts who will assist your learning in each individual course. When you begin a new course, your assigned course instructor will actively monitor your progress and will be in touch to offer one-on-one instruction and to provide you with information about webinars, cohort sessions, and other learning opportunities available to help you acquire the competencies you need to master the course. Your course instructor can discuss your learning for the course, help you find answers to content questions, and give you the tools to navigate the course successfully. In addition, you will communicate with course instructors by posting in the online learning community and participating in live discussion sessions such as webinars and cohorts.

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 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

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 will be required to demonstrate your skills and knowledge by completing the assessment(s) for each course. In general there are two types of assessments: performance assessments and objective assessments. Performance assessments contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Objective assessments include multiple-choice items, multiple-selection items, matching, short answer, drag-and-drop, and point-and-click item types, as well as case study and video-based items. Certifications verified through third parties may also be included in your program. More detailed information about each assessment is provided in each 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 Learning Resource Fee. They can be accessed or enrolled for through your courses. Some degree-specific resources are not 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 article provides additional details about the current state of mobile compatibility for learning resources at WGU.

[Student Handbook article: Can I use my mobile device 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 Associate of Science, Data Analytics

Course Description	CUs	Term
Composition: Writing with a Strategy	3	1
Introduction to Analytics	2	1
Scripting and Programming - Foundations	3	1
Data Management - Foundations	3	1
Natural Science Lab	2	1
Applied Probability and Statistics	3	2
Data Management - Applications	4	2
Introduction to Programming in Python	3	2
Network and Security - Foundations	3	2
Fundamentals of Spreadsheets and Data Presentations	3	3
Applied Algebra	3	3
Cloud Foundations	3	3
Health, Fitness, and Wellness	4	3
Data Analytics - Applications	4	4
Introduction to Systems Thinking	3	4
Ethics in Technology	3	4
Critical Thinking: Reason and Evidence	3	4
Introduction to Communication: Connecting with Others	3	5
American Politics and the US Constitution	3	5
Introduction to Physical and Human Geography	3	5

### 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 Associate of Science, Data Analytics

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.

## General Education

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### Composition: Writing with a Strategy

Welcome to Composition: Writing with a Strategy! In this course, you will focus on three main topics: understanding purpose, context, and audience, writing strategies and techniques, and editing and revising. In addition, the first section, will offer review on core elements of the writing process, cross-cultural communication, as well as working with words and common standards and practices.

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.

*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 writes with purpose for a given context and target audience.*
- *The learner incorporates writing strategies and techniques for written communication.*
- *The learner constructs a written document with correct format, style, structure, and grammar.*
- *The learner formulates a strategy for editing and revising written text.*
- *The learner composes constructive feedback of written texts.*

### 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 to a chosen research topic on a natural world phenomenon.*
- *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.*

### 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 the operations, processes, and procedures of fractions, decimals, and percentages to evaluate quantitative expressions.
- The graduate applies the operations, processes, and procedures of basic algebra to evaluate quantitative expressions, and to solve equations and inequalities.
- 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 variables through interpretation of visual displays and numerical measures.
- The graduate evaluates the relationship between two quantitative variables through correlation and regression.
- The graduate applies principles and methods of probability-based mathematics to explain and solve problems.

## 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 interprets the real-world meaning of various functions based on notation, graphical representations, and data representations.*
- *The learner applies linear functions and their properties to real-world problems.*
- *The learner applies polynomial functions and their properties to real-world problems.*
- *The learner applies exponential functions and their properties to real-world problems.*
- *The learner applies logistic functions and their properties to real-world problems.*
- *The learner analyzes graphical depictions of real-world situations using functional properties.*
- *The learner verifies the validity of a given model.*

## 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 the influence of disease, fitness, and lifestyle on the body.*
- *The graduate identifies the principles of nutrition and the components of a healthy diet.*
- *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.*

## Introduction to Systems Thinking

Introduction to Systems Thinking provides learners with the skills required to engage in a holistic systems-based approach to analyzing complex problems and solutions. This course introduces the foundational concepts and principles of systems thinking and provides opportunities to use a systems thinking approach to analyze and evaluate real-world case studies. The course will culminate with using systems thinking to develop a solution to an authentic complex problem. This course has no prerequisites, but general education math (C955 or C957) is preferred. Because the course is self-paced, learners may move through the material as quickly or as slowly as needed, with the goal of demonstrating proficiency in the five



competencies covered in the final assessment. If learners have no prior knowledge of this material, they can expect to spend 30 to 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 applies the basic principles and foundational theory of systems thinking to a scenario.*
- *The learner analyzes complex problems and solutions using a systems thinking methodology.*
- *The learner designs a solution to a complex problem using systems thinking.*

## **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 implements ethical decision-making frameworks in the information age.*
- *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.*

## **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 the quality of an argument.*
- *The learner evaluates evidence based on source credibility.*
- *The learner evaluates bias and its impact.*
- *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.*

## **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 explains how the structure and powers of the United States government interact to form public policy.*
- *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 struggle to balance individual liberty, public order, and state's rights.*
- *The graduate examines the influence of the media, public opinion, and political discourse on American democracy.*

## **Introduction to Physical and Human Geography**

This is Introduction to Physical and Human Geography, a three-module course that addresses the question of what geography really is in today's complex world; how migration affects—and has been affected by—geography; and one of the biggest present problems related to geography: climate change. Because the course is self-paced, you may move through the material as quickly or as slowly as you need to, with the goal of demonstrating proficiency in the five competencies 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.*

## **Data Analytics**

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### **Introduction to Analytics**

Analytics is the creative use of data and statistical modeling to tell a compelling story that not only drives strategic action, but also results in business value. Introduction to Analytics examines data analytics as a discipline and the various roles and functions within the field. You will expand your knowledge about what analytics is and develop a basic understanding of statistics, analysis, problem solving, and programming 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 identifies the variety of careers and roles related to the broad field of data analytics.*
- *The learner identifies the phases of the data analytics lifecycle, including contextualizing and defining the scope of each phase.*
- *The learner identifies the potential drivers of value from deploying an analytical solution.*

## 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.*

### Introduction to Programming in Python

Introduction to Programming in Python introduces skills in creating Python scripts with basic programming concepts. Learners will be able to create control flow with functions and loops, and to implement code with packages, modules, and libraries.

*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 creates python scripts with basic programming concepts.*
- *The learner creates control flow with functions and loops.*
- *The learner implements code with packages, modules, and libraries.*

## Data Management

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### 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 explains attributes of databases, database tables, and structured and associated query language (SQL) commands.*
- *The learner determines how to run queries for creation and manipulation of data in relational databases.*
- *The learner defines primary and foreign keys in data normalization.*

### Data Management - Applications

Data Management - Applications covers conceptual data modeling and introduces MySQL. Students will learn how to create simple to complex SELECT queries, including subqueries and joins, and how to use SQL to update and delete data. Topics covered in this course include exposure to MySQL; creating and modifying databases, tables, views, foreign keys and primary keys (FKs and PKs), and indexes; populating tables; and developing simple Select-From-Where (SFW) queries to

complex 3+ table join queries. The following course is a prerequisite: Data Management - Foundations.

*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 recommends databases and database management systems to meet organizational needs.*
- *The learner queries database tables and views with SQL code.*
- *The learner creates DML statements that insert, update, and delete data in data tables.*
- *The learner implements joins and aggregate functions in SQL queries.*

## **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.*

## **Business Core**

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### **Fundamentals of Spreadsheets and Data Presentations**

Fundamentals of Spreadsheets and Data Presentations offers learners an overview of the use of spreadsheet functions and methods for presenting data within spreadsheets. Learners will have the opportunity to explore features and uses of MS Excel and apply the tools to situations they may encounter while studying in their program. They will also be introduced to real world uses and tools to collect, organize and present data.

*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 performs common spreadsheet tasks requiring basic formatting, formulas, and functions.*
- *The learner prepares data for analysis.*
- *The learner creates a presentation from a spreadsheet dataset.*

## **Information Technology Management**

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### **Cloud Foundations**

Cloud Foundations introduces learners to real-world issues and practical solutions to cloud computing. This course covers the business value of cloud computing, examining cloud types, the steps to successful cloud adoption, and the effect cloud adoption has on IT service management, as well as the risks and consequences of implementing cloud solutions. This course prepares learners for the AWS Certified Practitioner certification exam. There are no 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 articulates the value proposition of cloud solutions in business scenarios.*
- *The learner defines cloud security and compliance.*

- *The learner identifies cloud technology solutions in IaaS, PaaS, and SaaS models.*
- *The learner determines the best-fit solution for a project based on the cost and support structures.*

## **Data Science**

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

## 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 Accessibility Services team Monday through Friday 8:00 a.m. to 5:00 p.m. MST at 1-877-HELP-WGU (877-435-7948) x5922 or at ADASupport@wgu.edu.

## Need More Information? WGU Student Services

WGU's Student Services team is dedicated exclusively to helping you achieve your academic goals. The Student Services office is available during extended hours to assist with general questions and requests. The Student Services team members help you resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback.

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

If you have inquiries or concerns that require technical support, please contact the WGU IT Service Desk. The IT Service Desk is available Monday through Friday, 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. To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) or e-mail [servicedesk@wgu.edu](mailto:servicedesk@wgu.edu). The support teams are generally closed in observance of university holidays.

For the most current information regarding WGU support services, please visit "Student Support" on the Student Portal at <http://my.wgu.edu>.