



Guaranteed Pathway Program Agreement  
Between WGU Texas  
and  
Del Mar College  
for the College of Information Technology Degree Programs

WGU Texas and Del Mar College, recognizing the need to facilitate the admission of transfer students from Del Mar College to WGU Texas as they pursue a bachelors in Information Technology (IT) resolve to adopt a Guaranteed Pathway Program Agreement partnership. Students who do not meet the terms described herein may still apply and will be considered for admission, although it is not guaranteed.

The Guaranteed Pathway Program is a dual admission program for students enrolled in Computer Science, Computer Information Systems or other IT related programs and maps coursework from Associates degrees to one of WGU Texas' IT degree programs. Details of WGU Texas' IT degree programs are published online at [http://texas.wgu.edu/online\\_it\\_degrees/information\\_technology](http://texas.wgu.edu/online_it_degrees/information_technology)

**General Admission Requirements and Eligibility:**

To be guaranteed admission under this agreement, a Del Mar College student must graduate with an Associates of Science (A.S.) Computer Science, Associate of Applied Science (A.A.S.) Computer Information Systems or the equivalent associates degree and meet the WGU admission requirements outlined below. Students must:

- Complete an admission application to Del Mar College and be admitted to a Del Mar College's degree program.
- If interested in WGU Texas dual admission program, student must indicate their desire to participate in the Guaranteed Pathway Program with WGU Texas and complete a WGU Texas application.
- Complete an intake interview (phone) with a WGU Enrollment counselor.
- Submit official transcripts for all academic work completed.
- Earn an Associates of Science (A.S.) Computer Science, Associate of Applied Science (A.A.S.) Computer Information Systems or the equivalent associates degree.
- Must meet WGU Texas IT College admission standards as published online at <http://texas.wgu.edu/admissions/requirements> and; [http://texas.wgu.edu/admissions/it\\_requirements](http://texas.wgu.edu/admissions/it_requirements)
- Qualified Del Mar College students can enroll monthly at WGU Texas.

**Students may expect the following:**

- Students accepted to WGU Texas under the terms of this agreement will be admitted into WGU Texas College of IT.
- Students will be given the same consideration as native WGU students for registration, financial aid, and any other opportunities open to native students with senior standing.
- The transfer tables included in this agreement specify the transfer of credits from Del Mar College degree programs and WGU Texas degree programs.
- IT Certifications will be transferred to WGU College of IT degree programs if applicable, passed and documented. Applicable IT certifications must have been completed within the past five years in order to be accepted for transfer to WGU Texas. A list of IT certifications that are transferable are published online at [http://texas.wgu.edu/admissions/it\\_certifications](http://texas.wgu.edu/admissions/it_certifications)

Benefits of the Guaranteed Pathway program for students:

- Guaranteed admission to a College of IT bachelors degree at WGU Texas.
- Advising from Del Mar College admission counselors regarding Del Mar College College of IT program requirements and advising from WGU Texas enrollment counselors on IT program requirements to help ensure a smooth transition of the Guaranteed Pathway program.
- Application fee for prospective students will be waived.
- Students will take the WGU readiness assessment; though it is not a condition of admission, it will be used for counseling and academic support services.
- Students would be eligible for WGU Texas Finish to Go Further partnership benefits published online at <http://texas.wgu.edu/cc>

All College of IT Degree programs are eligible for the partnership agreement, in addition to the College of Business B.S. Business - Information Technology Management degree program. The articulation tables provided in this agreement reflect the number of competency units (CUs) eligible for transfer. One CU is equivalent to one semester credit hour of learning.

[Transfer Tables Added Here]

See below

Responsibilities of Del Mar College:

- Disseminate information to Del Mar College students regarding the general conditions of this agreement. Those provisions include the conditions for guaranteed admission to WGU Texas. This agreement will be posted on the Del Mar College website to be utilized by Del Mar College students, faculty and staff.
- WGU Texas will provide Guaranteed Pathway Program information for Del Mar College students, faculty and staff members in addition to admission offices of all campuses.
- Communicate with Western Governors University representatives including the Dean and National Director for the College of Information Technology at WGU to discuss changes as needed which might impact or alter this agreement.
- Collaborate with WGU Texas to promote the Guaranteed Pathway Program among prospective and current Del Mar College students.

Responsibilities of WGU Texas:

- Provide academic advising services to Guaranteed Pathway students to assist students in making a smooth transition from the community college to WGU Texas.
- Collaborate with Del Mar College to promote the Guaranteed Pathway Program among students.

Responsibilities of the Student:

- Know and understand the requirements for the College of IT at WGU Texas.
- Follow the WGU Texas application and admission processes and timelines.

Review of the Guaranteed Pathway Program:

Del Mar College will designate officials who will be responsible for all aspects of the Guaranteed Pathway program at Del Mar College. WGU Texas will designate individuals responsible for all aspects of the Guaranteed Pathway Program at WGU Texas.

- Representing Del Mar College will be David Hattox, Interim Chairman, Dept. of Computer Science.
- Representing WGU Texas will be the WGU Texas Community Relations Manager, Public Relations Manager, Western Governors University Provost, Dean and National Director for the College of Information Technology, and the Enrollment - Operations Manager.

WGU reserves the right to make changes to its curriculum as needed based on program outcome data, accreditation and regulatory requirements but will communicate such changes at least 60 days in advance to partnering institutions with information about how those changes can be best accommodated or phased in for students.

Both parties are to promote and market, in collaboration with each other, the conditions of the Guaranteed Pathway Program to internal and external stakeholders. The Guaranteed Pathway Program will remain in effect until terminated by either party upon written notice to the other party of an intention to terminate.

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Veronica Vargas Stidvent  
Chancellor, WGU Texas

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Dr. Mark Escamilla  
President, Del Mar College

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Date

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Date



# Del Mar College AAS, Computer Information Systems - Digital Media

(Please find transferable credits on page 7.)

## *Bachelor of Science in* **Information Technology**

*The WGU Bachelor of Science in Information Technology (IT) program provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move on to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of 13 areas of study including IT fundamentals, software, networks, web development, security and IT project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project. Students who are seeking a specialization in software, networks, database, or security can complete the basic IT degree program and pass additional assessments to earn one of these designated emphases.*

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.



WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page.

Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	ENG 1301
TCP1	English Composition II	3	Requirement Satisfied
C132	Elements & Applications of Effective Communication	3	SPCH 1321
AGC1	Foundations of College Mathematics	3	Mathematics
C277	Finite Mathematics	4	Requirement Satisfied
C278	College Algebra	4	Requirement Satisfied
CJC1	Introduction to Probability and Statistics	3	Requirement Satisfied
INC1	Introduction to Biology with Lab	4	Requirement Satisfied
C164	Introduction to Physics	4	Requirement Satisfied
IWC1	Literature, Arts and Humanities	2	ARTS 1311
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	Requirement Satisfied
CLC1	Reasoning and Problem Solving	3	Requirement Satisfied
	Total Potential General Education Units:	41	
	Total Actual General Education Units Awarded to Student:	39	
Information Technology Core			
CWV1	Network Fundamentals	3	Requirement Satisfied
WFV1	IT Fundamentals I	3	Requirement Satisfied
C393	IT Fundamentals II	4	ITSC 1301
C394	IT Applications	4	ITSC 1305
EUP1/EUC1	Web Development Fundamentals	3	ITSC 2302 or 2313
DHV1	Windows OS Fundamentals	3	Requirement Satisfied
DIV1	Windows Server Admin Fundamentals	3	Requirement Satisfied
DJV1	Software Development Fundamentals	4	IMED 2305
DEV1	Security Fundamentals	3	Requirement Satisfied
CVV1	Database Fundamentals	3	Requirement Satisfied
	Total Potential Information Technology Core Units:	33	

	Total Actual Information Technology Core Units Awarded to Student:	33	
	Total Potential Transfer Units of Gen-Ed and Core:	74	
<b>Additional Transfers</b>			
BNC1	Organizational Behavior and Leadership	3	
MGC1	Principles of Management	4	
C298	Web Programming	6	
CUV1	Web Technologies	4	
CTV1	Security	4	
CJV1	Database I	4	
CRV1	Networks	4	
C220	Operating Systems I	3	
C221	Operating Systems II	3	
TPV1	Project Management	6	
<b>Non Transferable</b>			
SBT1	Technical Writing	3	
QZT1	IT Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	72	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	72	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [\*\*IT Certifications\*\*](#)

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.

## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft, CompTIA, and CIW to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

Information Technology Fundamentals

### **IT Fundamentals I**

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

### **IT Fundamentals I**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

### **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable*

devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:

- The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.
- The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.
- The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.
- The graduate communicates effectively with colleagues and clients in a technological environment.
- The graduate evaluates the implication of job-related professional behavior in a given scenario.

### **IT Foundations**

CompTIA A+ certification exam (220-801)

### **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.
- The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.

- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*
- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*

- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

### **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

### **Finite Mathematics**

*Included in this course are the following main topics: proofs, set theory, logic, number theory, mathematical systems, modular arithmetic, and graph theory. It covers the following competencies:*

- *The graduate applies the fundamental ideas of discrete mathematics including logic, set theory, and graph theory in formulating and solving problems.*
- *The graduate demonstrates computational proficiency with real numbers and recognizes the properties of the real number system and its subsets.*
- *The graduate represents numbers in different forms, recognizes relationships among numbers and number systems, deduces the meanings of operations, and demonstrates a conceptual understanding of numbers.*

### **Finite Mathematics**

Proctored, computer-based objective assessment

### **English Composition II**

*This course covers the following competencies:*



- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

### **Elements of Effective Communication**

*Elements of Effective Communication introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### **Elements of Effective Communication**

Proctored, computer-based objective assessment

### **Application of Effective Communication**

Performance assessment that includes writing

### **Introduction to Probability and Statistics**

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

## Introduction to Probability and Statistics

Proctored, computer-based objective assessment

### College Algebra

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### College Algebra

Proctored, computer-based objective assessment

### Integrated Natural Sciences

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*
- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*

- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

### **Geography**

Proctored, computer-based objective exam

### **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

#### **Introduction to Physics**

Proctored, computer-based objective exam

#### **Introduction to Physics Lab**

Performance assessment

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

#### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

#### **Web Development Fundamentals**

Proctored, computer-based objective assessment

## Web Systems and Technologies

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

### Web Technologies

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

## Web Programming

*This course focuses on applying characteristics and features of web programming languages, creating, modifying, and utilizing variables and data, decision structures, understanding functions, methods, properties, and events, client side web programming language, custom web programming language objects, controlling windows in a web programming language. It covers the following competencies:*

- *The graduate applies characteristics and features of Web programming languages.*
- *The graduate demonstrates the ability to create, modify, and utilize variables and data.*
- *The graduate demonstrates understanding of decision structures.*
- *The graduate demonstrates understanding of functions, methods, properties, and events.*
- *The graduate demonstrates understanding of client side Web programming language.*
- *The graduate demonstrates understanding of custom Web programming language objects.*
- *The graduate demonstrates understanding of how to control windows in a Web programming language.*

### Web Programming

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW JavaScript Specialist exam (1D0-635)

## Windows OS/Server Administration Fundamentals

## **Operating System Fundamentals**

*This course focuses on operating system configurations, installing and upgrading client systems, managing applications, managing files, folders, and devices, and understanding operating system maintenance. The Operating Systems Fundamentals course is for current and aspiring information technology professionals who want to learn the basics of operating systems. This assessment will help students master installation, configuration, and troubleshooting of one of the world's leading operating systems: Windows 7. Windows 7 is widely used in different industries and provides robust functionality that was not previously included by any client operating systems developed by Microsoft. Mastering the basics of this operating system will help students become an expert in information technology and a savvy user. This course covers the following competencies:*

- *The graduate analyzes the purpose and functionality of various operating system configuration options.*
- *The graduate applies the processes and principles necessary for installing and upgrading client systems.*
- *The graduate applies the processes and principles necessary for managing operating system applications, services, and users.*
- *The graduate applies the processes and principles necessary for managing files and folders in a given operating system environment.*
- *The graduate analyzes the principles and processes associated with the management of devices.*
- *The graduate applies strategies and tools for maintaining a given operating system.*

### **Windows OS Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## **Windows Server Administration**

*This course focuses on server installation and roles, active directory, storage technologies, and server performance and maintenance. It is designed to provide candidates with an assessment of their knowledge of fundamental server administration concepts. It can also serve as a stepping stone to the Microsoft Certified Technology Specialist exams. This course covers the following competencies:*

- *The graduate analyzes the purpose and importance of various server installation functions.*
- *The graduate analyzes the operational requirements for servers across a variety of functions and purposes.*
- *The graduate analyzes tools and procedures that govern server administration.*
- *The graduate analyzes the affordances and limitations of various storage technologies available for servers.*
- *The graduate analyzes various server performance management tools and strategies.*

- *The graduate applies processes and principles necessary in effective server maintenance.*

### **Windows Server Admin Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Server Administration Fundamentals (98-366) exam

## **Networks**

### **Network Fundamentals**

*This course focuses on network infrastructures, wired and wireless networks, network. It covers the following competencies:*

- *The graduate analyzes the characteristics of various network topologies and access methods.*
- *The graduate analyzes standards, procedures, and protocols used in wired and wireless networking technologies.*
- *The graduate analyzes network hardware capabilities important to the development of network infrastructure.*
- *The graduate analyzes the layers specified in the Open Systems Interconnection (OSI) model used to design, maintain, and troubleshoot networks.*
- *The graduate analyzes the various applications and affordances of network protocols and services.*

### **Network Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Network Fundamentals (98-366) exam

### **Networks**

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*



- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Leadership and Management**

### **Organizational Behavior and Management**

*This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.*

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

### **Principles of Management**

*This course addresses strategic planning, total quality, entrepreneurship, conflict and change, human resource management, diversity, and organizational structure. It covers this competency:*

- *The graduate can explain the strategic planning process.*

### **Principles of Management**

Proctored, computer-based objective exam

## **Databases**



## Database Fundamentals

*Database Fundamentals focuses on core database concepts, manipulating data, data storage, and database administration. All IT professionals should have, at minimum, a basic familiarity with database technology; this basic familiarity should be at a level above what one might find outside of IT. This course supplies at least that level of expertise. It covers the following competencies:*

- *The graduate integrates various core database concepts into the analysis of database functionality requirements.*
- *The graduate applies strategies for managing various data types effectively within a database.*
- *The graduate applies strategies for the effective manipulation of data within databases.*
- *The graduate analyzes various strategies employed in the storage of information within databases.*
- *The graduate analyzes concepts and principles surrounding the security of databases.*

### Database Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Database Administration Fundamentals (98-364) exam

## Database I

*This course covers the following competencies:*

- *The graduate distinguishes between basic database terms and concepts, their usage, and the types of database languages.*
- *The graduate reviews and selects appropriate database designs, and identifies design solutions that address application needs.*
- *The graduate applies normalization techniques in database design.*
- *The graduate follows appropriate database design best practices when creating conceptual, logical, enterprise, and physical database design models.*
- *The graduate describes appropriate Structured Query Language (SQL) concepts, and applies these concepts in given scenarios.*
- *The graduate uses relational algebra to perform database operations.*
- *The graduate recommends appropriate security-related configuration activities on database systems.*

### Database I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW v5 Database Design Specialist (1D0-541) exam

## Security

## Security Fundamentals

*This course focuses on security layers, operating systems security, auditing policies, network security, client security software, and server security software. It covers the following competencies:*

- *The graduate applies security measures appropriate to the core goals of an information security program.*
- *The graduate applies fundamental authentication and authorization methods.*
- *The graduate applies security auditing methods.*
- *The graduate selects appropriate network security technologies to secure a network infrastructure from common threats.*
- *The graduate analyzes appropriate methods for securing clients.*
- *The graduate analyzes appropriate methods for securing servers.*

### Security Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Security Fundamentals (98-367) exam

## Security

*This course focuses on basic concepts of security and security threats; recommending security procedures and controlling access by authenticating users and groups; identifying security needs and recommending appropriate security practices and strategies; encryption in network security; procedures for organizational operations; and evaluating risks associated with network security and recommending monitoring strategies and methods. It covers the following competencies:*

- *The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.*
- *The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.*
- *The graduate identifies security needs and recommends appropriate security practices for network infrastructure.*
- *The graduate identifies and explains the role of encryption in network security.*
- *The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.*
- *The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.*

### Security

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## Project Management

## **Project Management**

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and risk is balanced by thorough coverage of best practices in managing people and resources. Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:*

- *The graduate describes and explains key components of project plans.*
- *The graduate creates a project plan.*
- *The graduate implements, controls, and coordinates projects according to project plans.*
- *The graduate explains the strategies and processes of project closure, acceptance, and delivery.*

### **Project Management**

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## **Software Development**

### **Software Development Fundamentals**

*This course focuses on the fundamentals of core programming, object-oriented programming, software development, web applications, desktop applications and user interfaces, and databases. It covers the following competencies:*

- *The graduate analyzes core elements and tools used in the design and trace of computer programs.*
- *The graduate applies the key principles of object-oriented programming.*
- *The graduate applies lifecycle management activities to the development and testing of software applications.*
- *The graduate applies core elements and tools for developing Web applications.*
- *The graduate applies fundamental principles, concepts, and tools used in the development of desktop applications and user interfaces.*
- *The graduate applies fundamental principles, concepts, and tools used in the development and management of relational databases.*

### **Software Development Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Software Development Fundamentals (98-361) exam

## **Operating Systems**

## Operating Systems I

*This course focuses on system architecture, installation and package management, GNU and Unix commands, devices, filesystems and filesystem hierarchy standard. It covers the following competencies:*

- *The graduate can install and configure a specified computer operating system.*
- *The graduate can implement and manage the administration of network.*
- *The graduate can implement, manage, monitor, and troubleshoot hardware devices and drivers.*

### Operating Systems I

CompTIA Linux+ certification exam (LX0-101)

## Operating Systems II

*This course focuses on shells, scripting and data managements, user interfaces and desktops, administrative tasks, essential system services, networking fundamentals and security. IT covers the following competencies:*

- *The graduate can monitor and optimize system performance and reliability.*
- *The graduate can configure and troubleshoot the desktop environment.*
- *The graduate can implement, manage, and troubleshoot network protocols and services.*
- *The graduate can configure, manage, and troubleshoot security.*

### Operating Systems II

Proctored, computer-based objective assessment  
CompTIA Linux+ certification exam (LX0-102)

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the demonstration of competencies through a deliverable of significant scope that includes both a written capstone project and an oral defense.

### Information Technology Capstone Project

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email [studentservices@wgu.edu](mailto:studentservices@wgu.edu). We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.** To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [servicedesk@wgu.edu](mailto:servicedesk@wgu.edu).

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



# Del Mar College Certificate, Digital Media Advanced

(Please find transferable credits on page 7.)

## *Bachelor of Science in* **Information Technology**

*The WGU Bachelor of Science in Information Technology (IT) program provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move on to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of 13 areas of study including IT fundamentals, software, networks, web development, security and IT project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project. Students who are seeking a specialization in software, networks, database, or security can complete the basic IT degree program and pass additional assessments to earn one of these designated emphases.*

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.



Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will



also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page.

Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	
TCP1	English Composition II	3	
C132	Elements & Applications of Effective Communication	3	
AGC1	Foundations of College Mathematics	3	
C277	Finite Mathematics	4	
C278	College Algebra	4	
CJC1	Introduction to Probability and Statistics	3	
INC1	Introduction to Biology with Lab	4	
C164	Introduction to Physics	4	
IWC1	Literature, Arts and Humanities	2	
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	
CLC1	Reasoning and Problem Solving	3	
	Total Potential General Education Units:	41	
	Total Actual General Education Units Awarded to Student:		
Information Technology Core			
CWV1	Network Fundamentals	3	
WV1	IT Fundamentals I	3	
C393	IT Fundamentals II	4	
C394	IT Applications	4	
EUP1/EUC1	Web Development Fundamentals	3	ITSE 2302
DHV1	Windows OS Fundamentals	3	
DIV1	Windows Server Admin Fundamentals	3	
DJV1	Software Development Fundamentals	4	IMED 2305
DEV1	Security Fundamentals	3	
CVV1	Database Fundamentals	3	
	Total Potential Information Technology Core Units:	33	

	Total Actual Information Technology Core Units Awarded to Student:	7	
	Total Potential Transfer Units of Gen-Ed and Core:	74	
<b>Additional Transfers</b>			
BNC1	Organizational Behavior and Leadership	3	
MGC1	Principles of Management	4	
C298	Web Programming	6	
CUV1	Web Technologies	4	
CTV1	Security	4	
CJV1	Database I	4	
CRV1	Networks	4	
C220	Operating Systems I	3	
C221	Operating Systems II	3	
TPV1	Project Management	6	
<b>Non Transferable</b>			
SBT1	Technical Writing	3	
QZT1	IT Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	7	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	7	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [\*\*IT Certifications\*\*](#) \*Note that all certifications, degrees or courses must have been completed within five years of start date or as determined valid by certifying vendor (if date is less than 5 years).

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.

## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft, CompTIA, and CIW to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

### Information Technology Fundamentals

#### **IT Fundamentals I**

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

#### **IT Fundamentals I**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

#### **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable*

devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:

- The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.
- The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.
- The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.
- The graduate communicates effectively with colleagues and clients in a technological environment.
- The graduate evaluates the implication of job-related professional behavior in a given scenario.

### **IT Foundations**

CompTIA A+ certification exam (220-801)

### **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.
- The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.

- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*
- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*



- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

### **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

### **Finite Mathematics**

*Included in this course are the following main topics: proofs, set theory, logic, number theory, mathematical systems, modular arithmetic, and graph theory. It covers the following competencies:*

- *The graduate applies the fundamental ideas of discrete mathematics including logic, set theory, and graph theory in formulating and solving problems.*
- *The graduate demonstrates computational proficiency with real numbers and recognizes the properties of the real number system and its subsets.*
- *The graduate represents numbers in different forms, recognizes relationships among numbers and number systems, deduces the meanings of operations, and demonstrates a conceptual understanding of numbers.*

### **Finite Mathematics**

Proctored, computer-based objective assessment

### **English Composition II**

*This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

### **Elements of Effective Communication**

*Elements of Effective Communication introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### **Elements of Effective Communication**

Proctored, computer-based objective assessment

### **Application of Effective Communication**

Performance assessment that includes writing

### **Introduction to Probability and Statistics**

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

## Introduction to Probability and Statistics

Proctored, computer-based objective assessment

### College Algebra

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### College Algebra

Proctored, computer-based objective assessment

### Integrated Natural Sciences

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*
- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*

- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

### **Geography**

Proctored, computer-based objective exam

### **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

### **Web Development Fundamentals**

Proctored, computer-based objective assessment

## Web Systems and Technologies

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

### Web Technologies

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

## Web Programming

*This course focuses on applying characteristics and features of web programming languages, creating, modifying, and utilizing variables and data, decision structures, understanding functions, methods, properties, and events, client side web programming language, custom web programming language objects, controlling windows in a web programming language. It covers the following competencies:*

- *The graduate applies characteristics and features of Web programming languages.*
- *The graduate demonstrates the ability to create, modify, and utilize variables and data.*
- *The graduate demonstrates understanding of decision structures.*
- *The graduate demonstrates understanding of functions, methods, properties, and events.*
- *The graduate demonstrates understanding of client side Web programming language.*
- *The graduate demonstrates understanding of custom Web programming language objects.*
- *The graduate demonstrates understanding of how to control windows in a Web programming language.*

### Web Programming

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW JavaScript Specialist exam (1D0-635)

## Windows OS/Server Administration Fundamentals

## **Operating System Fundamentals**

*This course focuses on operating system configurations, installing and upgrading client systems, managing applications, managing files, folders, and devices, and understanding operating system maintenance. The Operating Systems Fundamentals course is for current and aspiring information technology professionals who want to learn the basics of operating systems. This assessment will help students master installation, configuration, and troubleshooting of one of the world's leading operating systems: Windows 7. Windows 7 is widely used in different industries and provides robust functionality that was not previously included by any client operating systems developed by Microsoft. Mastering the basics of this operating system will help students become an expert in information technology and a savvy user. This course covers the following competencies:*

- *The graduate analyzes the purpose and functionality of various operating system configuration options.*
- *The graduate applies the processes and principles necessary for installing and upgrading client systems.*
- *The graduate applies the processes and principles necessary for managing operating system applications, services, and users.*
- *The graduate applies the processes and principles necessary for managing files and folders in a given operating system environment.*
- *The graduate analyzes the principles and processes associated with the management of devices.*
- *The graduate applies strategies and tools for maintaining a given operating system.*

### **Windows OS Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## **Windows Server Administration**

*This course focuses on server installation and roles, active directory, storage technologies, and server performance and maintenance. It is designed to provide candidates with an assessment of their knowledge of fundamental server administration concepts. It can also serve as a stepping stone to the Microsoft Certified Technology Specialist exams. This course covers the following competencies:*

- *The graduate analyzes the purpose and importance of various server installation functions.*
- *The graduate analyzes the operational requirements for servers across a variety of functions and purposes.*
- *The graduate analyzes tools and procedures that govern server administration.*
- *The graduate analyzes the affordances and limitations of various storage technologies available for servers.*
- *The graduate analyzes various server performance management tools and strategies.*



- *The graduate applies processes and principles necessary in effective server maintenance.*

### **Windows Server Admin Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Server Administration Fundamentals (98-366) exam

## **Networks**

### **Network Fundamentals**

*This course focuses on network infrastructures, wired and wireless networks, network. It covers the following competencies:*

- *The graduate analyzes the characteristics of various network topologies and access methods.*
- *The graduate analyzes standards, procedures, and protocols used in wired and wireless networking technologies.*
- *The graduate analyzes network hardware capabilities important to the development of network infrastructure.*
- *The graduate analyzes the layers specified in the Open Systems Interconnection (OSI) model used to design, maintain, and troubleshoot networks.*
- *The graduate analyzes the various applications and affordances of network protocols and services.*

### **Network Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Network Fundamentals (98-366) exam

### **Networks**

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*



- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Leadership and Management**

### **Organizational Behavior and Management**

*This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.*

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

### **Principles of Management**

*This course addresses strategic planning, total quality, entrepreneurship, conflict and change, human resource management, diversity, and organizational structure. It covers this competency:*

- *The graduate can explain the strategic planning process.*

### **Principles of Management**

Proctored, computer-based objective exam

## **Databases**

## Database Fundamentals

*Database Fundamentals focuses on core database concepts, manipulating data, data storage, and database administration. All IT professionals should have, at minimum, a basic familiarity with database technology; this basic familiarity should be at a level above what one might find outside of IT. This course supplies at least that level of expertise. It covers the following competencies:*

- *The graduate integrates various core database concepts into the analysis of database functionality requirements.*
- *The graduate applies strategies for managing various data types effectively within a database.*
- *The graduate applies strategies for the effective manipulation of data within databases.*
- *The graduate analyzes various strategies employed in the storage of information within databases.*
- *The graduate analyzes concepts and principles surrounding the security of databases.*

### Database Fundamentals

Proctored at an authorized Certipoint Testing Center, computer-based Microsoft Technology Associate (MTA) Database Administration Fundamentals (98-364) exam

## Database I

*This course covers the following competencies:*

- *The graduate distinguishes between basic database terms and concepts, their usage, and the types of database languages.*
- *The graduate reviews and selects appropriate database designs, and identifies design solutions that address application needs.*
- *The graduate applies normalization techniques in database design.*
- *The graduate follows appropriate database design best practices when creating conceptual, logical, enterprise, and physical database design models.*
- *The graduate describes appropriate Structured Query Language (SQL) concepts, and applies these concepts in given scenarios.*
- *The graduate uses relational algebra to perform database operations.*
- *The graduate recommends appropriate security-related configuration activities on database systems.*

### Database I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW v5 Database Design Specialist (1D0-541) exam

## Security

## Security Fundamentals

*This course focuses on security layers, operating systems security, auditing policies, network security, client security software, and server security software. It covers the following competencies:*

- *The graduate applies security measures appropriate to the core goals of an information security program.*
- *The graduate applies fundamental authentication and authorization methods.*
- *The graduate applies security auditing methods.*
- *The graduate selects appropriate network security technologies to secure a network infrastructure from common threats.*
- *The graduate analyzes appropriate methods for securing clients.*
- *The graduate analyzes appropriate methods for securing servers.*

### Security Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Security Fundamentals (98-367) exam

## Security

*This course focuses on basic concepts of security and security threats; recommending security procedures and controlling access by authenticating users and groups; identifying security needs and recommending appropriate security practices and strategies; encryption in network security; procedures for organizational operations; and evaluating risks associated with network security and recommending monitoring strategies and methods. It covers the following competencies:*

- *The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.*
- *The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.*
- *The graduate identifies security needs and recommends appropriate security practices for network infrastructure.*
- *The graduate identifies and explains the role of encryption in network security.*
- *The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.*
- *The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.*

### Security

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## Project Management

## **Project Management**

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and risk is balanced by thorough coverage of best practices in managing people and resources. Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:*

- *The graduate describes and explains key components of project plans.*
- *The graduate creates a project plan.*
- *The graduate implements, controls, and coordinates projects according to project plans.*
- *The graduate explains the strategies and processes of project closure, acceptance, and delivery.*

### **Project Management**

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## **Software Development**

### **Software Development Fundamentals**

*This course focuses on the fundamentals of core programming, object-oriented programming, software development, web applications, desktop applications and user interfaces, and databases. It covers the following competencies:*

- *The graduate analyzes core elements and tools used in the design and trace of computer programs.*
- *The graduate applies the key principles of object-oriented programming.*
- *The graduate applies lifecycle management activities to the development and testing of software applications.*
- *The graduate applies core elements and tools for developing Web applications.*
- *The graduate applies fundamental principles, concepts, and tools used in the development of desktop applications and user interfaces.*
- *The graduate applies fundamental principles, concepts, and tools used in the development and management of relational databases.*

### **Software Development Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Software Development Fundamentals (98-361) exam

## **Operating Systems**

## Operating Systems I

*This course focuses on system architecture, installation and package management, GNU and Unix commands, devices, filesystems and filesystem hierarchy standard. It covers the following competencies:*

- *The graduate can install and configure a specified computer operating system.*
- *The graduate can implement and manage the administration of network.*
- *The graduate can implement, manage, monitor, and troubleshoot hardware devices and drivers.*

### Operating Systems I

CompTIA Linux+ certification exam (LX0-101)

## Operating Systems II

*This course focuses on shells, scripting and data managements, user interfaces and desktops, administrative tasks, essential system services, networking fundamentals and security. IT covers the following competencies:*

- *The graduate can monitor and optimize system performance and reliability.*
- *The graduate can configure and troubleshoot the desktop environment.*
- *The graduate can implement, manage, and troubleshoot network protocols and services.*
- *The graduate can configure, manage, and troubleshoot security.*

### Operating Systems II

Proctored, computer-based objective assessment  
CompTIA Linux+ certification exam (LX0-102)

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

# Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the demonstration of competencies through a deliverable of significant scope that includes both a written capstone project and an oral defense.

## Information Technology Capstone Project

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email [studentservices@wgu.edu](mailto:studentservices@wgu.edu). We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.** To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [servicedesk@wgu.edu](mailto:servicedesk@wgu.edu).

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



# Del Mar College Certificate, Digital Media Essentials

(Please find transferable credits on page 7.)

## *Bachelor of Science in* **Information Technology**

*The WGU Bachelor of Science in Information Technology (IT) program provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move on to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of 13 areas of study including IT fundamentals, software, networks, web development, security and IT project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project. Students who are seeking a specialization in software, networks, database, or security can complete the basic IT degree program and pass additional assessments to earn one of these designated emphases.*

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.



Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page.

Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	
TCP1	English Composition II	3	
C132	Elements & Applications of Effective Communication	3	
AGC1	Foundations of College Mathematics	3	
C277	Finite Mathematics	4	
C278	College Algebra	4	
CJC1	Introduction to Probability and Statistics	3	
INC1	Introduction to Biology with Lab	4	
C164	Introduction to Physics	4	
IWC1	Literature, Arts and Humanities	2	
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	
CLC1	Reasoning and Problem Solving	3	
	Total Potential General Education Units:	41	
	Total Actual General Education Units Awarded to Student:		
Information Technology Core			
CWV1	Network Fundamentals	3	
WFV1	IT Fundamentals I	3	
C393	IT Fundamentals II	4	ITSC 1301
C394	IT Applications	4	ITSC 1305
EUP1/EUC1	Web Development Fundamentals	3	ITSE 2313
DHV1	Windows OS Fundamentals	3	
DIV1	Windows Server Admin Fundamentals	3	
DJV1	Software Development Fundamentals	4	
DEV1	Security Fundamentals	3	
CVV1	Database Fundamentals	3	
	Total Potential Information Technology Core Units:	33	

	Total Actual Information Technology Core Units Awarded to Student:	11	
	Total Potential Transfer Units of Gen-Ed and Core:	74	
<b>Additional Transfers</b>			
BNC1	Organizational Behavior and Leadership	3	
MGC1	Principles of Management	4	
C298	Web Programming	6	
CUV1	Web Technologies	4	
CTV1	Security	4	
CJV1	Database I	4	
CRV1	Networks	4	
C220	Operating Systems I	3	
C221	Operating Systems II	3	
TPV1	Project Management	6	
<b>Non Transferable</b>			
SBT1	Technical Writing	3	
QZT1	IT Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	11	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	11	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [\*\*IT Certifications\*\*](#) *\*Note that all certifications, degrees or courses must have been completed within five years of start date or as determined valid by certifying vendor (if date is less than 5 years).*

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.

## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft, CompTIA, and CIW to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

### Information Technology Fundamentals

#### **IT Fundamentals I**

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

#### **IT Fundamentals I**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

#### **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable*

devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:

- The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.
- The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.
- The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.
- The graduate communicates effectively with colleagues and clients in a technological environment.
- The graduate evaluates the implication of job-related professional behavior in a given scenario.

### **IT Foundations**

CompTIA A+ certification exam (220-801)

### **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.
- The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.



- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*
- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*

- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

### **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

### **Finite Mathematics**

*Included in this course are the following main topics: proofs, set theory, logic, number theory, mathematical systems, modular arithmetic, and graph theory. It covers the following competencies:*

- *The graduate applies the fundamental ideas of discrete mathematics including logic, set theory, and graph theory in formulating and solving problems.*
- *The graduate demonstrates computational proficiency with real numbers and recognizes the properties of the real number system and its subsets.*
- *The graduate represents numbers in different forms, recognizes relationships among numbers and number systems, deduces the meanings of operations, and demonstrates a conceptual understanding of numbers.*

### **Finite Mathematics**

Proctored, computer-based objective assessment

### **English Composition II**

*This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

### **Elements of Effective Communication**

*Elements of Effective Communication introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### **Elements of Effective Communication**

Proctored, computer-based objective assessment

### **Application of Effective Communication**

Performance assessment that includes writing

### **Introduction to Probability and Statistics**

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

## Introduction to Probability and Statistics

Proctored, computer-based objective assessment

### College Algebra

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### College Algebra

Proctored, computer-based objective assessment

### Integrated Natural Sciences

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*
- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*

- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

### **Geography**

Proctored, computer-based objective exam

### **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

### **Web Development Fundamentals**

Proctored, computer-based objective assessment

## Web Systems and Technologies

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

### Web Technologies

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

## Web Programming

*This course focuses on applying characteristics and features of web programming languages, creating, modifying, and utilizing variables and data, decision structures, understanding functions, methods, properties, and events, client side web programming language, custom web programming language objects, controlling windows in a web programming language. It covers the following competencies:*

- *The graduate applies characteristics and features of Web programming languages.*
- *The graduate demonstrates the ability to create, modify, and utilize variables and data.*
- *The graduate demonstrates understanding of decision structures.*
- *The graduate demonstrates understanding of functions, methods, properties, and events.*
- *The graduate demonstrates understanding of client side Web programming language.*
- *The graduate demonstrates understanding of custom Web programming language objects.*
- *The graduate demonstrates understanding of how to control windows in a Web programming language.*

### Web Programming

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW JavaScript Specialist exam (1D0-635)

## Windows OS/Server Administration Fundamentals



## **Operating System Fundamentals**

*This course focuses on operating system configurations, installing and upgrading client systems, managing applications, managing files, folders, and devices, and understanding operating system maintenance. The Operating Systems Fundamentals course is for current and aspiring information technology professionals who want to learn the basics of operating systems. This assessment will help students master installation, configuration, and troubleshooting of one of the world's leading operating systems: Windows 7. Windows 7 is widely used in different industries and provides robust functionality that was not previously included by any client operating systems developed by Microsoft. Mastering the basics of this operating system will help students become an expert in information technology and a savvy user. This course covers the following competencies:*

- *The graduate analyzes the purpose and functionality of various operating system configuration options.*
- *The graduate applies the processes and principles necessary for installing and upgrading client systems.*
- *The graduate applies the processes and principles necessary for managing operating system applications, services, and users.*
- *The graduate applies the processes and principles necessary for managing files and folders in a given operating system environment.*
- *The graduate analyzes the principles and processes associated with the management of devices.*
- *The graduate applies strategies and tools for maintaining a given operating system.*

### **Windows OS Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## **Windows Server Administration**

*This course focuses on server installation and roles, active directory, storage technologies, and server performance and maintenance. It is designed to provide candidates with an assessment of their knowledge of fundamental server administration concepts. It can also serve as a stepping stone to the Microsoft Certified Technology Specialist exams. This course covers the following competencies:*

- *The graduate analyzes the purpose and importance of various server installation functions.*
- *The graduate analyzes the operational requirements for servers across a variety of functions and purposes.*
- *The graduate analyzes tools and procedures that govern server administration.*
- *The graduate analyzes the affordances and limitations of various storage technologies available for servers.*
- *The graduate analyzes various server performance management tools and strategies.*



- *The graduate applies processes and principles necessary in effective server maintenance.*

### **Windows Server Admin Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Server Administration Fundamentals (98-366) exam

## **Networks**

### **Network Fundamentals**

*This course focuses on network infrastructures, wired and wireless networks, network. It covers the following competencies:*

- *The graduate analyzes the characteristics of various network topologies and access methods.*
- *The graduate analyzes standards, procedures, and protocols used in wired and wireless networking technologies.*
- *The graduate analyzes network hardware capabilities important to the development of network infrastructure.*
- *The graduate analyzes the layers specified in the Open Systems Interconnection (OSI) model used to design, maintain, and troubleshoot networks.*
- *The graduate analyzes the various applications and affordances of network protocols and services.*

### **Network Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Network Fundamentals (98-366) exam

### **Networks**

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*

- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Leadership and Management**

### **Organizational Behavior and Management**

*This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.*

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

### **Principles of Management**

*This course addresses strategic planning, total quality, entrepreneurship, conflict and change, human resource management, diversity, and organizational structure. It covers this competency:*

- *The graduate can explain the strategic planning process.*

### **Principles of Management**

Proctored, computer-based objective exam

## **Databases**

## Database Fundamentals

*Database Fundamentals focuses on core database concepts, manipulating data, data storage, and database administration. All IT professionals should have, at minimum, a basic familiarity with database technology; this basic familiarity should be at a level above what one might find outside of IT. This course supplies at least that level of expertise. It covers the following competencies:*

- *The graduate integrates various core database concepts into the analysis of database functionality requirements.*
- *The graduate applies strategies for managing various data types effectively within a database.*
- *The graduate applies strategies for the effective manipulation of data within databases.*
- *The graduate analyzes various strategies employed in the storage of information within databases.*
- *The graduate analyzes concepts and principles surrounding the security of databases.*

### Database Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Database Administration Fundamentals (98-364) exam

## Database I

*This course covers the following competencies:*

- *The graduate distinguishes between basic database terms and concepts, their usage, and the types of database languages.*
- *The graduate reviews and selects appropriate database designs, and identifies design solutions that address application needs.*
- *The graduate applies normalization techniques in database design.*
- *The graduate follows appropriate database design best practices when creating conceptual, logical, enterprise, and physical database design models.*
- *The graduate describes appropriate Structured Query Language (SQL) concepts, and applies these concepts in given scenarios.*
- *The graduate uses relational algebra to perform database operations.*
- *The graduate recommends appropriate security-related configuration activities on database systems.*

### Database I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW v5 Database Design Specialist (1D0-541) exam

## Security

## Security Fundamentals

*This course focuses on security layers, operating systems security, auditing policies, network security, client security software, and server security software. It covers the following competencies:*

- *The graduate applies security measures appropriate to the core goals of an information security program.*
- *The graduate applies fundamental authentication and authorization methods.*
- *The graduate applies security auditing methods.*
- *The graduate selects appropriate network security technologies to secure a network infrastructure from common threats.*
- *The graduate analyzes appropriate methods for securing clients.*
- *The graduate analyzes appropriate methods for securing servers.*

### Security Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Security Fundamentals (98-367) exam

## Security

*This course focuses on basic concepts of security and security threats; recommending security procedures and controlling access by authenticating users and groups; identifying security needs and recommending appropriate security practices and strategies; encryption in network security; procedures for organizational operations; and evaluating risks associated with network security and recommending monitoring strategies and methods. It covers the following competencies:*

- *The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.*
- *The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.*
- *The graduate identifies security needs and recommends appropriate security practices for network infrastructure.*
- *The graduate identifies and explains the role of encryption in network security.*
- *The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.*
- *The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.*

### Security

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## Project Management

## **Project Management**

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and risk is balanced by thorough coverage of best practices in managing people and resources. Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:*

- *The graduate describes and explains key components of project plans.*
- *The graduate creates a project plan.*
- *The graduate implements, controls, and coordinates projects according to project plans.*
- *The graduate explains the strategies and processes of project closure, acceptance, and delivery.*

### **Project Management**

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## **Software Development**

### **Software Development Fundamentals**

*This course focuses on the fundamentals of core programming, object-oriented programming, software development, web applications, desktop applications and user interfaces, and databases. It covers the following competencies:*

- *The graduate analyzes core elements and tools used in the design and trace of computer programs.*
- *The graduate applies the key principles of object-oriented programming.*
- *The graduate applies lifecycle management activities to the development and testing of software applications.*
- *The graduate applies core elements and tools for developing Web applications.*
- *The graduate applies fundamental principles, concepts, and tools used in the development of desktop applications and user interfaces.*
- *The graduate applies fundamental principles, concepts, and tools used in the development and management of relational databases.*

### **Software Development Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Software Development Fundamentals (98-361) exam

## **Operating Systems**

## Operating Systems I

*This course focuses on system architecture, installation and package management, GNU and Unix commands, devices, filesystems and filesystem hierarchy standard. It covers the following competencies:*

- *The graduate can install and configure a specified computer operating system.*
- *The graduate can implement and manage the administration of network.*
- *The graduate can implement, manage, monitor, and troubleshoot hardware devices and drivers.*

### Operating Systems I

CompTIA Linux+ certification exam (LX0-101)

## Operating Systems II

*This course focuses on shells, scripting and data managements, user interfaces and desktops, administrative tasks, essential system services, networking fundamentals and security. IT covers the following competencies:*

- *The graduate can monitor and optimize system performance and reliability.*
- *The graduate can configure and troubleshoot the desktop environment.*
- *The graduate can implement, manage, and troubleshoot network protocols and services.*
- *The graduate can configure, manage, and troubleshoot security.*

### Operating Systems II

Proctored, computer-based objective assessment  
CompTIA Linux+ certification exam (LX0-102)

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

# Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the demonstration of competencies through a deliverable of significant scope that includes both a written capstone project and an oral defense.

## Information Technology Capstone Project

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email [studentservices@wgu.edu](mailto:studentservices@wgu.edu). We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.** To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [servicedesk@wgu.edu](mailto:servicedesk@wgu.edu).

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





# Del Mar College

## AAS, Computer Information Systems - Digital Media

(Please find transferable credits on page 6.)

### *Bachelor of Science in*

## Information Technology, Networks Administration Emphasis

*The WGU Bachelor of Science in Information Technology (IT) program provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of four domains of study: IT fundamentals, software, networks, and IT project management. There are eleven areas of study that students master, including IT fundamentals, operating systems, software, networks, database, web systems, security, and project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project.*

*Students seeking the BS IT—Networks Administration Emphasis demonstrate additional competencies in this area by taking and passing specific industry certification exams, which lead to the Microsoft Certified IT Professional on Windows Server 2008. Students who possess a current (less than five years old) MCITP on Windows Server 2008 will have these assessments waived. The domain cannot be cleared through previous college work or professional experience.*

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU’s Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU’s competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page. Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY—NETWORKS ADMINISTRATION

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	ENG 1301
TCP1	English Composition II	3	Requirement Satisfied
C132	Elements & Applications of Effective Communication	3	SPCH 1321
AGC1	Foundations of College Mathematics	3	Mathematics
C278	College Algebra	4	Requirement Satisfied
CJC1	Introduction to Probability and Statistics	3	Requirement Satisfied
INC1	Introduction to Biology with Lab	4	Requirement Satisfied
C164	Introduction to Physics	4	Requirement Satisfied
IWC1	Literature, Arts and Humanities	2	ARTS 1311
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	Requirement Satisfied
CLC1	Reasoning and Problem Solving	3	Requirement Satisfied
	Total Potential General Education Units:	37	
	Total Actual General Education Units Awarded to Student:	35	
<b>Information Technology Core</b>			
WFV1	IT Fundamentals I	3	Requirement Satisfied
C393	IT Fundamentals II	4	Requirement Satisfied
C394	IT Applications	4	Requirement Satisfied
EUP1/EUC1	Web Development Fundamentals	3	Requirement Satisfied
DHV1	Windows OS Fundamentals	3	Requirement Satisfied
	Total Potential Information Technology Core Units:	17	
	Total Actual Information Technology Core Units Awarded to Student:	17	
	Total Potential Transfer Units of Gen-Ed and Core:	54	
<b>Additional Transfers</b>			
BNC1	Organizational Behavior and Leadership	3	
MGC1	Principles of Management	4	
C183	Operating Systems	6	

C184	Operating Systems Management Policies	6	
C185	Network Policies and Services Management	6	
C298	Web Programming	6	
CUV1	Web Technologies	4	
CTV1	Security	4	
CRV1	Networks	4	
C186	Server Administration	6	
TPV1	Project Management	6	
C187	Network Reliability and Fault Tolerance	6	
<b>Non Transferable</b>			
SBT1	Technical Writing	3	
RBT1	IT - Network Administration Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	52	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	52	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [\*\*IT Certifications\*\*](#)

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.





## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology – Networks Administration Emphasis*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

## Information Technology Fundamentals

### IT Fundamentals I

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

### IT Fundamentals I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

### IT Foundations

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying,*

*installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

### **IT Foundations**

CompTIA A+ certification exam (220-801)

### **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.*
- *The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.*

- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*
- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*

- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

### **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

### **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

### **Introduction to Probability and Statistics**

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

### **Introduction to Probability and Statistics**

Proctored, computer-based objective assessment

### **Elements of Effective Communication**

*Elements of Effective Communication introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### **Elements of Effective Communication**

Proctored, computer-based objective assessment

### **Application of Effective Communication**

Performance assessment that includes writing

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*

- *The graduate will describe and discuss the environment.*

### **Geography**

Proctored, computer-based objective exam

### **College Algebra**

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### **College Algebra**

Proctored, computer-based objective assessment

### **Integrated Natural Sciences**

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*
- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*



- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

### **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*

- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

### **Web Development Fundamentals**

Proctored, computer-based objective assessment

### **Web Systems and Technologies**

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

## Web Technologies

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

### Web Programming

*This course focuses on applying characteristics and features of web programming languages, creating, modifying, and utilizing variables and data, decision structures, understanding functions, methods, properties, and events, client side web programming language, custom web programming language objects, controlling windows in a web programming language. It covers the following competencies:*

- *The graduate applies characteristics and features of Web programming languages.*
- *The graduate demonstrates the ability to create, modify, and utilize variables and data.*
- *The graduate demonstrates understanding of decision structures.*
- *The graduate demonstrates understanding of functions, methods, properties, and events.*
- *The graduate demonstrates understanding of client side Web programming language.*
- *The graduate demonstrates understanding of custom Web programming language objects.*
- *The graduate demonstrates understanding of how to control windows in a Web programming language.*

## Web Programming

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW JavaScript Specialist exam (1D0-635)

## Windows OS/Server Admin Fundamentals

### Operating System Fundamentals

## Windows OS Fundamentals

Proctored, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## Networks

### Networks

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*

- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Security**

### **Security**

*This course focuses on basic concepts of security and security threats; recommending security procedures and controlling access by authenticating users and groups; identifying security needs and recommending appropriate security practices and strategies; encryption in network security; procedures for organizational operations; and evaluating risks associated with network security and recommending monitoring strategies and methods.*

### **Security**

Proctored at an authorized Prometric Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## **Operating Systems**

### **Operating Systems**

*This course covers the following competencies:*

- *The graduate develops plans to install and upgrade to Windows 8.1.*
- *The graduate configures hardware and applications.*
- *The graduate configures network connectivity.*
- *The graduate configures access to resources.*
- *The graduate will configure remote access and mobility.*
- *The graduate monitors and maintains Windows clients.*
- *The graduate configures system and data recovery options.*

### **Operating Systems**

Microsoft Configuring Windows 8.1 (70-687) exam

## Operating Systems Management Policies

*This course covers the following competencies:*

- *The graduate develops plans to install and support operating systems and applications.*
- *The graduate maintains and supports resource access.*
- *The graduate maintains and supports Windows clients and devices.*

### Operating Systems Management Policies

Microsoft Supporting Windows 8.1 (70-688) exam

## Network Security Challenges

### Network Policies and Services Management

*This course covers the following competencies:*

- *The graduate installs and configures Windows Server 2012 R2.*
- *The graduate configures server roles and features in Windows Server 2012 environment.*
- *The graduate configures settings associated with Hyper-V technology in Windows Server 2012 R2 environment.*
- *The graduate deploys and configures Core network services in Windows Server 2012 environment.*
- *The graduate installs and administers Active Directory in the Windows Server 2012 environment.*
- *The graduate creates and manages group policies in the Windows Server 2012 environment.*

### Network Policies and Services Management

Outside vendor assessment

## Leadership and Management

### Principles of Management

*This course addresses strategic planning, total quality, entrepreneurship, conflict and change, human resource management, diversity, and organizational structure. It covers this competency:*

- *The graduate can explain the strategic planning process.*

### Principles of Management

Proctored, computer-based objective exam

### Organizational Behavior and Management

*This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership*

*theories and management strategies in a series of scenario-based problems. It 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.*

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

## **Network Design and Management**

### **Server Administration**

*This course covers the following competencies:*

- *The graduate develops plans for to deploy, install, and manage servers.*
- *The graduate installs and configures file and print servers and services.*
- *The graduate demonstrates the configuration of network services and access.*
- *The graduate configures a network policy server infrastructure.*
- *The graduate configures and manages active directory.*
- *The graduate configures and manages group policies.*

### **Server Administration**

Outside vendor assessment

### **Network Reliability and Fault Tolerance**

*This course covers the following competencies:*

- *The graduate configures and manages high availability.*
- *The graduate configures file and storage solutions.*
- *The graduate implements business continuity and disaster recovery.*
- *The graduate configures network services.*
- *The graduate configures Active Directory infrastructure.*
- *The graduate configures identity and access solutions.*

## Network Reliability and Fault Tolerance

Outside vendor assessment

## Project Management

### Project Management

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and risk is balanced by thorough coverage of best practices in managing people and resources. Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:*

- *The graduate describes and explains key components of project plans.*
- *The graduate creates a project plan.*
- *The graduate implements, controls, and coordinates projects according to project plans.*
- *The graduate explains the strategies and processes of project closure, acceptance, and delivery.*

### Project Management

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis. It includes a work product specified in consultation with and with the approval of the mentor. It may be a project, a set of policy recommendations, a business plan, a marketing plan, action research, a strategic plan, a product, or a service.



### **IT - Network Administration Capstone Written Project**

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## **Need More Information? WGU Student Services**

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email **[studentservices@wgu.edu](mailto:studentservices@wgu.edu)**. We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.** To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email **[servicedesk@wgu.edu](mailto:servicedesk@wgu.edu)**.

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



# Del Mar College Certificate, Digital Media Advanced

(Please find transferable credits on page 6.)

## *Bachelor of Science in* **Information Technology, Networks Administration Emphasis**

*The WGU Bachelor of Science in Information Technology (IT) program provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of four domains of study: IT fundamentals, software, networks, and IT project management. There are eleven areas of study that students master, including IT fundamentals, operating systems, software, networks, database, web systems, security, and project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project.*

*Students seeking the BS IT—Networks Administration Emphasis demonstrate additional competencies in this area by taking and passing specific industry certification exams, which lead to the Microsoft Certified IT Professional on Windows Server 2008. Students who possess a current (less than five years old) MCITP on Windows Server 2008 will have these assessments waived. The domain cannot be cleared through previous college work or professional experience.*

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU’s Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU’s competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page. Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY—NETWORKS ADMINISTRATION

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	
TCP1	English Composition II	3	
C132	Elements & Applications of Effective Communication	3	
AGC1	Foundations of College Mathematics	3	
C278	College Algebra	4	
CJC1	Introduction to Probability and Statistics	3	
INC1	Introduction to Biology with Lab	4	
C164	Introduction to Physics	4	
IWC1	Literature, Arts and Humanities	2	
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	
CLC1	Reasoning and Problem Solving	3	
	Total Potential General Education Units:	37	
	Total Actual General Education Units Awarded to Student:		
Information Technology Core			
WFV1	IT Fundamentals I	3	
C393	IT Fundamentals II	4	
C394	IT Applications	4	
EUP1/EUC1	Web Development Fundamentals	3	ITSE 2302
DHV1	Windows OS Fundamentals	3	
	Total Potential Information Technology Core Units:	17	
	Total Actual Information Technology Core Units Awarded to Student:	3	
	Total Potential Transfer Units of Gen-Ed and Core:	54	
Additional Transfers			
BNC1	Organizational Behavior and Leadership	3	
MGC1	Principles of Management	4	
C183	Operating Systems	6	



C184	Operating Systems Management Policies	6	
C185	Network Policies and Services Management	6	
C298	Web Programming	6	
CUV1	Web Technologies	4	
CTV1	Security	4	
CRV1	Networks	4	
C186	Server Administration	6	
TPV1	Project Management	6	
C187	Network Reliability and Fault Tolerance	6	
<b>Non Transferable</b>			
SBT1	Technical Writing	3	
RBT1	IT - Network Administration Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	3	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	3	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [\*\*IT Certifications\*\*](#) \*Note that all certifications, degrees or courses must have been completed within five years of start date or as determined valid by certifying vendor (if date is less than 5 years).

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.



## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology – Networks Administration Emphasis*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

## Information Technology Fundamentals

### IT Fundamentals I

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

### IT Fundamentals I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

### IT Foundations

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying,*

*installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

### **IT Foundations**

CompTIA A+ certification exam (220-801)

### **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.*
- *The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.*

- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*
- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*

- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

### **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

### **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

### **Introduction to Probability and Statistics**

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

### **Introduction to Probability and Statistics**

Proctored, computer-based objective assessment

### **Elements of Effective Communication**

*Elements of Effective Communication introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### **Elements of Effective Communication**

Proctored, computer-based objective assessment

### **Application of Effective Communication**

Performance assessment that includes writing

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*



- *The graduate will describe and discuss the environment.*

### **Geography**

Proctored, computer-based objective exam

## **College Algebra**

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### **College Algebra**

Proctored, computer-based objective assessment

## **Integrated Natural Sciences**

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*
- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*

- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

### **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*

- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

### **Web Development Fundamentals**

Proctored, computer-based objective assessment

### **Web Systems and Technologies**

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

## Web Technologies

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

### Web Programming

*This course focuses on applying characteristics and features of web programming languages, creating, modifying, and utilizing variables and data, decision structures, understanding functions, methods, properties, and events, client side web programming language, custom web programming language objects, controlling windows in a web programming language. It covers the following competencies:*

- *The graduate applies characteristics and features of Web programming languages.*
- *The graduate demonstrates the ability to create, modify, and utilize variables and data.*
- *The graduate demonstrates understanding of decision structures.*
- *The graduate demonstrates understanding of functions, methods, properties, and events.*
- *The graduate demonstrates understanding of client side Web programming language.*
- *The graduate demonstrates understanding of custom Web programming language objects.*
- *The graduate demonstrates understanding of how to control windows in a Web programming language.*

## Web Programming

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW JavaScript Specialist exam (1D0-635)

## Windows OS/Server Admin Fundamentals

### Operating System Fundamentals

## Windows OS Fundamentals

Proctored, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## Networks

### Networks

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*

- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Security**

### **Security**

*This course focuses on basic concepts of security and security threats; recommending security procedures and controlling access by authenticating users and groups; identifying security needs and recommending appropriate security practices and strategies; encryption in network security; procedures for organizational operations; and evaluating risks associated with network security and recommending monitoring strategies and methods.*

### **Security**

Proctored at an authorized Prometric Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## **Operating Systems**

### **Operating Systems**

*This course covers the following competencies:*

- *The graduate develops plans to install and upgrade to Windows 8.1.*
- *The graduate configures hardware and applications.*
- *The graduate configures network connectivity.*
- *The graduate configures access to resources.*
- *The graduate will configure remote access and mobility.*
- *The graduate monitors and maintains Windows clients.*
- *The graduate configures system and data recovery options.*

### **Operating Systems**

Microsoft Configuring Windows 8.1 (70-687) exam

## Operating Systems Management Policies

*This course covers the following competencies:*

- *The graduate develops plans to install and support operating systems and applications.*
- *The graduate maintains and supports resource access.*
- *The graduate maintains and supports Windows clients and devices.*

### Operating Systems Management Policies

Microsoft Supporting Windows 8.1 (70-688) exam

## Network Security Challenges

### Network Policies and Services Management

*This course covers the following competencies:*

- *The graduate installs and configures Windows Server 2012 R2.*
- *The graduate configures server roles and features in Windows Server 2012 environment.*
- *The graduate configures settings associated with Hyper-V technology in Windows Server 2012 R2 environment.*
- *The graduate deploys and configures Core network services in Windows Server 2012 environment.*
- *The graduate installs and administers Active Directory in the Windows Server 2012 environment.*
- *The graduate creates and manages group policies in the Windows Server 2012 environment.*

### Network Policies and Services Management

Outside vendor assessment

## Leadership and Management

### Principles of Management

*This course addresses strategic planning, total quality, entrepreneurship, conflict and change, human resource management, diversity, and organizational structure. It covers this competency:*

- *The graduate can explain the strategic planning process.*

### Principles of Management

Proctored, computer-based objective exam

### Organizational Behavior and Management

*This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership*

*theories and management strategies in a series of scenario-based problems. It 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.*

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

## **Network Design and Management**

### **Server Administration**

*This course covers the following competencies:*

- *The graduate develops plans for to deploy, install, and manage servers.*
- *The graduate installs and configures file and print servers and services.*
- *The graduate demonstrates the configuration of network services and access.*
- *The graduate configures a network policy server infrastructure.*
- *The graduate configures and manages active directory.*
- *The graduate configures and manages group policies.*

### **Server Administration**

Outside vendor assessment

### **Network Reliability and Fault Tolerance**

*This course covers the following competencies:*

- *The graduate configures and manages high availability.*
- *The graduate configures file and storage solutions.*
- *The graduate implements business continuity and disaster recovery.*
- *The graduate configures network services.*
- *The graduate configures Active Directory infrastructure.*
- *The graduate configures identity and access solutions.*



## Network Reliability and Fault Tolerance

Outside vendor assessment

## Project Management

### Project Management

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and risk is balanced by thorough coverage of best practices in managing people and resources. Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:*

- *The graduate describes and explains key components of project plans.*
- *The graduate creates a project plan.*
- *The graduate implements, controls, and coordinates projects according to project plans.*
- *The graduate explains the strategies and processes of project closure, acceptance, and delivery.*

### Project Management

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis. It includes a work product specified in consultation with and with the approval of the mentor. It may be a project, a set of policy recommendations, a business plan, a marketing plan, action research, a strategic plan, a product, or a service.

### **IT - Network Administration Capstone Written Project**

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## **Need More Information? WGU Student Services**

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email **[studentservices@wgu.edu](mailto:studentservices@wgu.edu)**. We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.** To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email **[servicedesk@wgu.edu](mailto:servicedesk@wgu.edu)**.

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



# Del Mar College Certificate, Digital Media Essentials

(Please find transferable credits on page 6.)

## *Bachelor of Science in* **Information Technology, Networks Administration Emphasis**

*The WGU Bachelor of Science in Information Technology (IT) program provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of four domains of study: IT fundamentals, software, networks, and IT project management. There are eleven areas of study that students master, including IT fundamentals, operating systems, software, networks, database, web systems, security, and project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project.*

*Students seeking the BS IT—Networks Administration Emphasis demonstrate additional competencies in this area by taking and passing specific industry certification exams, which lead to the Microsoft Certified IT Professional on Windows Server 2008. Students who possess a current (less than five years old) MCITP on Windows Server 2008 will have these assessments waived. The domain cannot be cleared through previous college work or professional experience.*

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page. Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.



## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY—NETWORKS ADMINISTRATION

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	
TCP1	English Composition II	3	
C132	Elements & Applications of Effective Communication	3	
AGC1	Foundations of College Mathematics	3	
C278	College Algebra	4	
CJC1	Introduction to Probability and Statistics	3	
INC1	Introduction to Biology with Lab	4	
C164	Introduction to Physics	4	
IWC1	Literature, Arts and Humanities	2	
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	
CLC1	Reasoning and Problem Solving	3	
	Total Potential General Education Units:	37	
	Total Actual General Education Units Awarded to Student:		
Information Technology Core			
WFV1	IT Fundamentals I	3	
C393	IT Fundamentals II	4	ITSC 1301
C394	IT Applications	4	ITSC 1305
EUP1/EUC1	Web Development Fundamentals	3	ITSE 2313
DHV1	Windows OS Fundamentals	3	
	Total Potential Information Technology Core Units:	17	
	Total Actual Information Technology Core Units Awarded to Student:	11	
	Total Potential Transfer Units of Gen-Ed and Core:	54	
Additional Transfers			
BNC1	Organizational Behavior and Leadership	3	
MGC1	Principles of Management	4	
C183	Operating Systems	6	

C184	Operating Systems Management Policies	6	
C185	Network Policies and Services Management	6	
C298	Web Programming	6	
CUV1	Web Technologies	4	
CTV1	Security	4	
CRV1	Networks	4	
C186	Server Administration	6	
TPV1	Project Management	6	
C187	Network Reliability and Fault Tolerance	6	
<b>Non Transferable</b>			
SBT1	Technical Writing	3	
RBT1	IT - Network Administration Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	11	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	11	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [\*\*IT Certifications\*\*](#) \*Note that all certifications, degrees or courses must have been completed within five years of start date or as determined valid by certifying vendor (if date is less than 5 years).

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.



## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology – Networks Administration Emphasis*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

## Information Technology Fundamentals

### IT Fundamentals I

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

### IT Fundamentals I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

### IT Foundations

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying,*

*installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

### **IT Foundations**

CompTIA A+ certification exam (220-801)

### **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.*
- *The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.*

- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*
- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*

- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

### **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

### **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

### **Introduction to Probability and Statistics**

*This course covers the following competencies:*



- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

### **Introduction to Probability and Statistics**

Proctored, computer-based objective assessment

### **Elements of Effective Communication**

*Elements of Effective Communication introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### **Elements of Effective Communication**

Proctored, computer-based objective assessment

### **Application of Effective Communication**

Performance assessment that includes writing

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*

- *The graduate will describe and discuss the environment.*

### **Geography**

Proctored, computer-based objective exam

### **College Algebra**

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### **College Algebra**

Proctored, computer-based objective assessment

### **Integrated Natural Sciences**

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*
- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*

- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

### **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*

- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

### **Web Development Fundamentals**

Proctored, computer-based objective assessment

### **Web Systems and Technologies**

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

## Web Technologies

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

### Web Programming

*This course focuses on applying characteristics and features of web programming languages, creating, modifying, and utilizing variables and data, decision structures, understanding functions, methods, properties, and events, client side web programming language, custom web programming language objects, controlling windows in a web programming language. It covers the following competencies:*

- *The graduate applies characteristics and features of Web programming languages.*
- *The graduate demonstrates the ability to create, modify, and utilize variables and data.*
- *The graduate demonstrates understanding of decision structures.*
- *The graduate demonstrates understanding of functions, methods, properties, and events.*
- *The graduate demonstrates understanding of client side Web programming language.*
- *The graduate demonstrates understanding of custom Web programming language objects.*
- *The graduate demonstrates understanding of how to control windows in a Web programming language.*

## Web Programming

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW JavaScript Specialist exam (1D0-635)

## Windows OS/Server Admin Fundamentals

### Operating System Fundamentals

## Windows OS Fundamentals

Proctored, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## Networks

### Networks

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*

- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Security**

### **Security**

*This course focuses on basic concepts of security and security threats; recommending security procedures and controlling access by authenticating users and groups; identifying security needs and recommending appropriate security practices and strategies; encryption in network security; procedures for organizational operations; and evaluating risks associated with network security and recommending monitoring strategies and methods.*

### **Security**

Proctored at an authorized Prometric Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## **Operating Systems**

### **Operating Systems**

*This course covers the following competencies:*

- *The graduate develops plans to install and upgrade to Windows 8.1.*
- *The graduate configures hardware and applications.*
- *The graduate configures network connectivity.*
- *The graduate configures access to resources.*
- *The graduate will configure remote access and mobility.*
- *The graduate monitors and maintains Windows clients.*
- *The graduate configures system and data recovery options.*

### **Operating Systems**

Microsoft Configuring Windows 8.1 (70-687) exam

## **Operating Systems Management Policies**

*This course covers the following competencies:*

- *The graduate develops plans to install and support operating systems and applications.*
- *The graduate maintains and supports resource access.*
- *The graduate maintains and supports Windows clients and devices.*

### **Operating Systems Management Policies**

Microsoft Supporting Windows 8.1 (70-688) exam

## **Network Security Challenges**

### **Network Policies and Services Management**

*This course covers the following competencies:*

- *The graduate installs and configures Windows Server 2012 R2.*
- *The graduate configures server roles and features in Windows Server 2012 environment.*
- *The graduate configures settings associated with Hyper-V technology in Windows Server 2012 R2 environment.*
- *The graduate deploys and configures Core network services in Windows Server 2012 environment.*
- *The graduate installs and administers Active Directory in the Windows Server 2012 environment.*
- *The graduate creates and manages group policies in the Windows Server 2012 environment.*

### **Network Policies and Services Management**

Outside vendor assessment

## **Leadership and Management**

### **Principles of Management**

*This course addresses strategic planning, total quality, entrepreneurship, conflict and change, human resource management, diversity, and organizational structure. It covers this competency:*

- *The graduate can explain the strategic planning process.*

### **Principles of Management**

Proctored, computer-based objective exam

### **Organizational Behavior and Management**

*This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership*



*theories and management strategies in a series of scenario-based problems. It 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.*

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

## **Network Design and Management**

### **Server Administration**

*This course covers the following competencies:*

- *The graduate develops plans for to deploy, install, and manage servers.*
- *The graduate installs and configures file and print servers and services.*
- *The graduate demonstrates the configuration of network services and access.*
- *The graduate configures a network policy server infrastructure.*
- *The graduate configures and manages active directory.*
- *The graduate configures and manages group policies.*

### **Server Administration**

Outside vendor assessment

### **Network Reliability and Fault Tolerance**

*This course covers the following competencies:*

- *The graduate configures and manages high availability.*
- *The graduate configures file and storage solutions.*
- *The graduate implements business continuity and disaster recovery.*
- *The graduate configures network services.*
- *The graduate configures Active Directory infrastructure.*
- *The graduate configures identity and access solutions.*

## Network Reliability and Fault Tolerance

Outside vendor assessment

## Project Management

### Project Management

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and risk is balanced by thorough coverage of best practices in managing people and resources. Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:*

- *The graduate describes and explains key components of project plans.*
- *The graduate creates a project plan.*
- *The graduate implements, controls, and coordinates projects according to project plans.*
- *The graduate explains the strategies and processes of project closure, acceptance, and delivery.*

### Project Management

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis. It includes a work product specified in consultation with and with the approval of the mentor. It may be a project, a set of policy recommendations, a business plan, a marketing plan, action research, a strategic plan, a product, or a service.

### **IT - Network Administration Capstone Written Project**

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## **Need More Information? WGU Student Services**

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email **[studentservices@wgu.edu](mailto:studentservices@wgu.edu)**. We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.** To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email **[servicedesk@wgu.edu](mailto:servicedesk@wgu.edu)**.

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



# Del Mar College

## AAS, Computer Information Systems - Digital Media

(Please find transferable credits on page 7.)

### *Bachelor of Science in*

## Information Technology, Security Emphasis

*The Bachelor of Science in Information Technology (IT) provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad, collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of four domains of study: IT fundamentals, software, networks and IT project management. There are eight areas of study (sub-domains) that students master including IT fundamentals, operating systems, software, networks, database, web systems, security, and project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project.*

*Students seeking the BS IT-Security Emphasis demonstrate additional competencies in this area by taking and passing specific industry certification exams: the CISCO Certified Network Associate (CCNA – 640-802) and the CISCO CCNA Security Certification (640-553 IINS). Students who have passed these exams prior to enrollment will have the requirements waived.*

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.



WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page.

Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY–SECURITY

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	ENG 1301
TCP1	English Composition II	3	Requirement Satisfied
C132	Elements & Applications of Effective Communication	3	SPCH 1321
AGC1	Foundations of College Mathematics	3	Mathematics
C277	Finite Mathematics	4	Requirement Satisfied
C278	College Algebra	4	Requirement Satisfied
CJC1	Introduction to Probability and Statistics	3	Requirement Satisfied
INC1	Introduction to Biology with Lab	4	Requirement Satisfied
C164	Introduction to Physics	4	Requirement Satisfied
IWC1	Literature, Arts and Humanities	2	ARTS 1311
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	Requirement Satisfied
CLC1	Reasoning and Problem Solving	3	Requirement Satisfied
	Total Potential General Education Units:	41	
	Total Actual General Education Units Awarded to Student:	39	
Information Technology Core			
WV1	IT Fundamentals I	3	Requirement Satisfied
C393	IT Fundamentals II	4	ITSC 1301
C394	IT Applications	4	ITSC 1305
EUP1/EUC1	Web Development Fundamentals	3	ITSC 2302 or 2313
DHV1	Windows OS Fundamentals	3	Requirement Satisfied
DJV1	Software Development Fundamentals	4	Requirement Satisfied
	Total Potential Information Technology Core Units:	21	
	Total Actual Information Technology Core Units Awarded to Student:	21	
	Total Potential Transfer Units of Gen-Ed and Core:	62	
Additional Transfers			
BNC1	Organizational Behavior and Leadership	3	

MGC1	Principles of Management	4	
CUV1	Web Technologies	4	
C246/C247	Fundamentals of Interconnecting NW Devices	12	
CTV1	Security	4	
CJV1	Database I	4	
CRV1	Networks	4	
C220	Operating Systems I	3	
C221	Operating Systems II	3	
C299	Designing Customized Security	6	
TPV1	Project Management	6	
<b>Non Transferable</b>			
SBT1	Technical Writing	3	
RGT1	IT -Security Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	60	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	60	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [\*\*IT Certifications\*\*](#)

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.

## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology – Security Emphasis*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft, CompTIA, Cisco, and CIW to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

## Information Technology Fundamentals

### IT Fundamentals I

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

### IT Fundamentals I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

## **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

### **IT Foundations**

CompTIA A+ certification exam (220-801)

## **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.*

- *The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.*
- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*



- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*
- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

## **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

## **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

## **Introduction to Probability and Statistics**

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

### **Introduction to Probability and Statistics**

Proctored, computer-based objective assessment

## **Elements of Effective Communication**

*This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### **Elements of Effective Communication**

Proctored, computer-based objective assessment

### **Application of Effective Communication**

Performance assessment that includes writing

## **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

## Geography

Proctored, computer-based objective exam

## Finite Mathematics

*Included in this course are the following main topics: proofs, set theory, logic, number theory, mathematical systems, modular arithmetic, and graph theory. It covers the following competencies:*

- *The graduate applies the fundamental ideas of discrete mathematics including logic, set theory, and graph theory in formulating and solving problems.*
- *The graduate demonstrates computational proficiency with real numbers and recognizes the properties of the real number system and its subsets.*
- *The graduate represents numbers in different forms, recognizes relationships among numbers and number systems, deduces the meanings of operations, and demonstrates a conceptual understanding of numbers.*

## Finite Mathematics

Proctored, computer-based objective assessment

## College Algebra

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

## College Algebra

Proctored, computer-based objective assessment

## **Integrated Natural Sciences**

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*
- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*
- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

## **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

## **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

#### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

#### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

#### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

#### **Web Development Fundamentals**

## **Web Systems and Technologies**

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

### **Web Technologies**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

## **Windows OS/Server Administration Fundamentals**

### **Operating System Fundamentals**

*This course focuses on operating system configurations, installing and upgrading client systems, managing applications, managing files, folders, and devices, and understanding operating system maintenance. The Operating Systems Fundamentals course is for current and aspiring information technology professionals who want to learn the basics of operating systems. This assessment will help students master installation, configuration, and troubleshooting of one of the world's leading operating systems: Windows 7. Windows 7 is widely used in different industries and provides robust functionality that was not previously included by any client operating systems developed by Microsoft. Mastering the basics of this operating system will help students become an expert in information technology and a savvy user. This course covers the following competencies:*

- *The graduate analyzes the purpose and functionality of various operating system configuration options.*
- *The graduate applies the processes and principles necessary for installing and upgrading client systems.*
- *The graduate applies the processes and principles necessary for managing operating system applications, services, and users.*
- *The graduate applies the processes and principles necessary for managing files and folders in a given operating system environment.*
- *The graduate analyzes the principles and processes associated with the management of devices.*

- *The graduate applies strategies and tools for maintaining a given operating system.*

### **Windows OS Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## **Networks**

### **Networks**

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Operating Systems**

### **Operating Systems I**

*This course focuses on system architecture, installation and package management, GNU and Unix commands, devices, filesystems and filesystem hierarchy standard. It covers the following competencies:*

- *The graduate can install and configure a specified computer operating system.*
- *The graduate can implement and manage the administration of network.*
- *The graduate can implement, manage, monitor, and troubleshoot hardware devices and drivers.*



## Operating Systems I

CompTIA Linux+ certification exam (LX0-101)

## Operating Systems II

*This course focuses on shells, scripting and data managements, user interfaces and desktops, administrative tasks, essential system services, networking fundamentals and security. IT covers the following competencies:*

- *The graduate can monitor and optimize system performance and reliability.*
- *The graduate can configure and troubleshoot the desktop environment.*
- *The graduate can implement, manage, and troubleshoot network protocols and services.*
- *The graduate can configure, manage, and troubleshoot security.*

## Operating Systems II

Proctored, computer-based objective assessment

CompTIA Linux+ certification exam (LX0-102)

# Security

## Security

*This course covers the following competencies:*

- *The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.*
- *The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.*
- *The graduate identifies security needs and recommends appropriate security practices for network infrastructure.*
- *The graduate identifies and explains the role of encryption in network security.*
- *The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.*
- *The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.*

## Security

Proctored at an authorized Prometric Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## Designing Customized Security

*Designing Customized Security outlines the sequence of learning activities to help students develop competence in the subject area of securing networks, which deals specifically with Cisco networks. It prepares students for the Cisco 640-553 IINS certification exam. This course covers the following competencies:*

- *The graduate identifies technical and security issues, and creates conceptual designs for network infrastructure security.*
- *The graduate creates logical conceptual designs for network infrastructure security.*
- *The graduate creates physical designs for network infrastructure security.*
- *The graduate designs access control strategies for various types of data.*
- *The graduate creates physical designs for client infrastructure security.*

### **Designing Customized Security (CNV1)**

Proctored at an authorized Pearson Vue Testing Center, computer-based Cisco CCNA Security (IINS 640-553) exam.

## **Databases**

### **Database I**

*This course covers the following competencies:*

- *The graduate distinguishes between basic database terms and concepts, their usage, and the types of database languages.*
- *The graduate reviews and selects appropriate database designs, and identifies design solutions that address application needs.*
- *The graduate applies normalization techniques in database design.*
- *The graduate follows appropriate database design best practices when creating conceptual, logical, enterprise, and physical database design models.*
- *The graduate describes appropriate Structured Query Language (SQL) concepts, and applies these concepts in given scenarios.*
- *The graduate uses relational algebra to perform database operations.*
- *The graduate recommends appropriate security-related configuration activities on database systems.*

### **Database I**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW v5 Database Design Specialist (1D0-541) exam

## **Software Development**

### **Software Development Fundamentals**

*This course focuses on the fundamentals of core programming, object-oriented programming, software development, web applications, desktop applications and user interfaces, and databases. It covers the following competencies:*

- *The graduate analyzes core elements and tools used in the design and trace of computer programs.*
- *The graduate applies the key principles of object-oriented programming.*

- *The graduate applies lifecycle management activities to the development and testing of software applications.*
- *The graduate applies core elements and tools for developing Web applications.*
- *The graduate applies fundamental principles, concepts, and tools used in the development of desktop applications and user interfaces.*
- *The graduate applies fundamental principles, concepts, and tools used in the development and management of relational databases.*

### **Software Development Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Software Development Fundamentals (98-361) exam

## **Interconnecting Network Devices**

### **Interconnecting Network Devices**

*These courses cover skills and concepts to include features and functions of networking components, knowledge, and skills needed to install, configure, and troubleshoot basic networking hardware protocols and services. Additionally, concepts including media and topologies, protocols, standards, network implementation, and network support are covered.*

*This course covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Fundamentals of Interconnecting Network Devices**

Interconnection Cisco Networking Devices Part I Exam (ICND1, 640-822)

### **Interconnecting Network Devices**

Interconnection Cisco Networking Devices Part II Exam (ICND2, 640-816)

## **Project Management**

### **Project Management**

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and*

risk is balanced by thorough coverage of best practices in managing people and resources. Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:

- The graduate describes and explains key components of project plans.
- The graduate creates a project plan.
- The graduate implements, controls, and coordinates projects according to project plans.
- The graduate explains the strategies and processes of project closure, acceptance, and delivery.

### **Project Management**

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## **Leadership and Management**

### **Organizational Behavior and Management**

This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

### **Principles of Management**

This course addresses strategic planning, total quality, entrepreneurship, conflict and change, human resource management, diversity, and organizational structure. It covers this competency:

- The graduate can explain the strategic planning process.

### **Principles of Management**

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis. It includes a work product specified in consultation with and with the approval of the mentor. It may be a project, a set of policy recommendations, a business plan, a marketing plan, action research, a strategic plan, a product, or a service.

### IT Security Capstone Project

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email [studentservices@wgu.edu](mailto:studentservices@wgu.edu). We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT**. To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [servicedesk@wgu.edu](mailto:servicedesk@wgu.edu).

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



# Del Mar College Certificate, Digital Media Advanced

(Please find transferable credits on page 7.)

## *Bachelor of Science in* **Information Technology, Security Emphasis**

*The Bachelor of Science in Information Technology (IT) provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad, collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of four domains of study: IT fundamentals, software, networks and IT project management. There are eight areas of study (sub-domains) that students master including IT fundamentals, operating systems, software, networks, database, web systems, security, and project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project.*

*Students seeking the BS IT-Security Emphasis demonstrate additional competencies in this area by taking and passing specific industry certification exams: the CISCO Certified Network Associate (CCNA – 640-802) and the CISCO CCNA Security Certification (640-553 IINS). Students who have passed these exams prior to enrollment will have the requirements waived.*



## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page.

Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY–SECURITY

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	
TCP1	English Composition II	3	
C132	Elements & Applications of Effective Communication	3	
AGC1	Foundations of College Mathematics	3	
C277	Finite Mathematics	4	
C278	College Algebra	4	
CJC1	Introduction to Probability and Statistics	3	
INC1	Introduction to Biology with Lab	4	
C164	Introduction to Physics	4	
IWC1	Literature, Arts and Humanities	2	
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	
CLC1	Reasoning and Problem Solving	3	
	Total Potential General Education Units:	41	
	Total Actual General Education Units Awarded to Student:		
<b>Information Technology Core</b>			
WFV1	IT Fundamentals I	3	
C393	IT Fundamentals II	4	
C394	IT Applications	4	
EUP1/EUC1	Web Development Fundamentals	3	ITSE 2302
DHV1	Windows OS Fundamentals	3	
DJV1	Software Development Fundamentals	4	IMED 2305
	Total Potential Information Technology Core Units:	21	
	Total Actual Information Technology Core Units Awarded to Student:	7	
	Total Potential Transfer Units of Gen-Ed and Core:	62	
<b>Additional Transfers</b>			
BNC1	Organizational Behavior and Leadership	3	

MGC1	Principles of Management	4	
CUV1	Web Technologies	4	
C246/C247	Fundamentals of Interconnecting NW Devices	12	
CTV1	Security	4	
CJV1	Database I	4	
CRV1	Networks	4	
C220	Operating Systems I	3	
C221	Operating Systems II	3	
C299	Designing Customized Security	6	
TPV1	Project Management	6	
<b>Non Transferable</b>			
SBT1	Technical Writing	3	
RGT1	IT -Security Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	7	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	7	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [IT Certifications](#) \*Note that all certifications, degrees or courses must have been completed within five years of start date or as determined valid by certifying vendor (if date is less than 5 years).

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.



## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology – Security Emphasis*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft, CompTIA, Cisco, and CIW to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

## Information Technology Fundamentals

### IT Fundamentals I

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

### IT Fundamentals I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

## **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

### **IT Foundations**

CompTIA A+ certification exam (220-801)

## **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.*

- *The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.*
- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*

- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*
- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

## **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

## **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

## **Introduction to Probability and Statistics**

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

### **Introduction to Probability and Statistics**

Proctored, computer-based objective assessment

## **Elements of Effective Communication**

*This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### **Elements of Effective Communication**

Proctored, computer-based objective assessment

### **Application of Effective Communication**

Performance assessment that includes writing

## **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

## Geography

Proctored, computer-based objective exam

## Finite Mathematics

*Included in this course are the following main topics: proofs, set theory, logic, number theory, mathematical systems, modular arithmetic, and graph theory. It covers the following competencies:*

- *The graduate applies the fundamental ideas of discrete mathematics including logic, set theory, and graph theory in formulating and solving problems.*
- *The graduate demonstrates computational proficiency with real numbers and recognizes the properties of the real number system and its subsets.*
- *The graduate represents numbers in different forms, recognizes relationships among numbers and number systems, deduces the meanings of operations, and demonstrates a conceptual understanding of numbers.*

## Finite Mathematics

Proctored, computer-based objective assessment

## College Algebra

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

## College Algebra

Proctored, computer-based objective assessment



## **Integrated Natural Sciences**

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*
- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*
- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

## **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

## **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*



- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

#### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

#### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

#### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

#### **Web Development Fundamentals**

## **Web Systems and Technologies**

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

### **Web Technologies**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

## **Windows OS/Server Administration Fundamentals**

### **Operating System Fundamentals**

*This course focuses on operating system configurations, installing and upgrading client systems, managing applications, managing files, folders, and devices, and understanding operating system maintenance. The Operating Systems Fundamentals course is for current and aspiring information technology professionals who want to learn the basics of operating systems. This assessment will help students master installation, configuration, and troubleshooting of one of the world's leading operating systems: Windows 7. Windows 7 is widely used in different industries and provides robust functionality that was not previously included by any client operating systems developed by Microsoft. Mastering the basics of this operating system will help students become an expert in information technology and a savvy user. This course covers the following competencies:*

- *The graduate analyzes the purpose and functionality of various operating system configuration options.*
- *The graduate applies the processes and principles necessary for installing and upgrading client systems.*
- *The graduate applies the processes and principles necessary for managing operating system applications, services, and users.*
- *The graduate applies the processes and principles necessary for managing files and folders in a given operating system environment.*
- *The graduate analyzes the principles and processes associated with the management of devices.*

- *The graduate applies strategies and tools for maintaining a given operating system.*

### **Windows OS Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## **Networks**

### **Networks**

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Operating Systems**

### **Operating Systems I**

*This course focuses on system architecture, installation and package management, GNU and Unix commands, devices, filesystems and filesystem hierarchy standard. It covers the following competencies:*

- *The graduate can install and configure a specified computer operating system.*
- *The graduate can implement and manage the administration of network.*
- *The graduate can implement, manage, monitor, and troubleshoot hardware devices and drivers.*

## Operating Systems I

CompTIA Linux+ certification exam (LX0-101)

## Operating Systems II

*This course focuses on shells, scripting and data managements, user interfaces and desktops, administrative tasks, essential system services, networking fundamentals and security. IT covers the following competencies:*

- *The graduate can monitor and optimize system performance and reliability.*
- *The graduate can configure and troubleshoot the desktop environment.*
- *The graduate can implement, manage, and troubleshoot network protocols and services.*
- *The graduate can configure, manage, and troubleshoot security.*

## Operating Systems II

Proctored, computer-based objective assessment

CompTIA Linux+ certification exam (LX0-102)

# Security

## Security

*This course covers the following competencies:*

- *The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.*
- *The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.*
- *The graduate identifies security needs and recommends appropriate security practices for network infrastructure.*
- *The graduate identifies and explains the role of encryption in network security.*
- *The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.*
- *The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.*

## Security

Proctored at an authorized Prometric Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## Designing Customized Security

*Designing Customized Security outlines the sequence of learning activities to help students develop competence in the subject area of securing networks, which deals specifically with Cisco networks. It prepares students for the Cisco 640-553 IINS certification exam. This course covers the following competencies:*

- *The graduate identifies technical and security issues, and creates conceptual designs for network infrastructure security.*
- *The graduate creates logical conceptual designs for network infrastructure security.*
- *The graduate creates physical designs for network infrastructure security.*
- *The graduate designs access control strategies for various types of data.*
- *The graduate creates physical designs for client infrastructure security.*

### **Designing Customized Security (CNV1)**

Proctored at an authorized Pearson Vue Testing Center, computer-based Cisco CCNA Security (IINS 640-553) exam.

## **Databases**

### **Database I**

*This course covers the following competencies:*

- *The graduate distinguishes between basic database terms and concepts, their usage, and the types of database languages.*
- *The graduate reviews and selects appropriate database designs, and identifies design solutions that address application needs.*
- *The graduate applies normalization techniques in database design.*
- *The graduate follows appropriate database design best practices when creating conceptual, logical, enterprise, and physical database design models.*
- *The graduate describes appropriate Structured Query Language (SQL) concepts, and applies these concepts in given scenarios.*
- *The graduate uses relational algebra to perform database operations.*
- *The graduate recommends appropriate security-related configuration activities on database systems.*

### **Database I**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW v5 Database Design Specialist (1D0-541) exam

## **Software Development**

### **Software Development Fundamentals**

*This course focuses on the fundamentals of core programming, object-oriented programming, software development, web applications, desktop applications and user interfaces, and databases. It covers the following competencies:*

- *The graduate analyzes core elements and tools used in the design and trace of computer programs.*
- *The graduate applies the key principles of object-oriented programming.*

- *The graduate applies lifecycle management activities to the development and testing of software applications.*
- *The graduate applies core elements and tools for developing Web applications.*
- *The graduate applies fundamental principles, concepts, and tools used in the development of desktop applications and user interfaces.*
- *The graduate applies fundamental principles, concepts, and tools used in the development and management of relational databases.*

### **Software Development Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Software Development Fundamentals (98-361) exam

## **Interconnecting Network Devices**

### **Interconnecting Network Devices**

*These courses cover skills and concepts to include features and functions of networking components, knowledge, and skills needed to install, configure, and troubleshoot basic networking hardware protocols and services. Additionally, concepts including media and topologies, protocols, standards, network implementation, and network support are covered.*

*This course covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Fundamentals of Interconnecting Network Devices**

Interconnection Cisco Networking Devices Part I Exam (ICND1, 640-822)

### **Interconnecting Network Devices**

Interconnection Cisco Networking Devices Part II Exam (ICND2, 640-816)

## **Project Management**

### **Project Management**

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and*



risk is balanced by thorough coverage of best practices in managing people and resources. Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:

- The graduate describes and explains key components of project plans.
- The graduate creates a project plan.
- The graduate implements, controls, and coordinates projects according to project plans.
- The graduate explains the strategies and processes of project closure, acceptance, and delivery.

### **Project Management**

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## **Leadership and Management**

### **Organizational Behavior and Management**

This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

### **Principles of Management**

This course addresses strategic planning, total quality, entrepreneurship, conflict and change, human resource management, diversity, and organizational structure. It covers this competency:

- The graduate can explain the strategic planning process.

### **Principles of Management**



## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis. It includes a work product specified in consultation with and with the approval of the mentor. It may be a project, a set of policy recommendations, a business plan, a marketing plan, action research, a strategic plan, a product, or a service.

### IT Security Capstone Project

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email [studentservices@wgu.edu](mailto:studentservices@wgu.edu). We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT**. To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [\*\*servicedesk@wgu.edu\*\*](mailto:servicedesk@wgu.edu).

For the most current information regarding WGU support services, please visit the “Help” tab on the Student Portal at [\*\*http://my.wgu.edu\*\*](http://my.wgu.edu).



# Del Mar College Certificate, Digital Media Essentials

(Please find transferable credits on page 7.)

## *Bachelor of Science in* **Information Technology, Security Emphasis**

*The Bachelor of Science in Information Technology (IT) provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad, collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of four domains of study: IT fundamentals, software, networks and IT project management. There are eight areas of study (sub-domains) that students master including IT fundamentals, operating systems, software, networks, database, web systems, security, and project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project.*

*Students seeking the BS IT-Security Emphasis demonstrate additional competencies in this area by taking and passing specific industry certification exams: the CISCO Certified Network Associate (CCNA – 640-802) and the CISCO CCNA Security Certification (640-553 IINS). Students who have passed these exams prior to enrollment will have the requirements waived.*

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page.



Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY–SECURITY

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	
TCP1	English Composition II	3	
C132	Elements & Applications of Effective Communication	3	
AGC1	Foundations of College Mathematics	3	
C277	Finite Mathematics	4	
C278	College Algebra	4	
CJC1	Introduction to Probability and Statistics	3	
INC1	Introduction to Biology with Lab	4	
C164	Introduction to Physics	4	
IWC1	Literature, Arts and Humanities	2	
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	
CLC1	Reasoning and Problem Solving	3	
	Total Potential General Education Units:	41	
	Total Actual General Education Units Awarded to Student:		
Information Technology Core			
WFV1	IT Fundamentals I	3	
C393	IT Fundamentals II	4	ITSC 1301
C394	IT Applications	4	ITSC 1305
EUP1/EUC1	Web Development Fundamentals	3	ITSE 2313
DHV1	Windows OS Fundamentals	3	
DJV1	Software Development Fundamentals	4	
	Total Potential Information Technology Core Units:	21	
	Total Actual Information Technology Core Units Awarded to Student:	11	
	Total Potential Transfer Units of Gen-Ed and Core:	62	
Additional Transfers			
BNC1	Organizational Behavior and Leadership	3	

MGC1	Principles of Management	4	
CUV1	Web Technologies	4	
C246/C247	Fundamentals of Interconnecting NW Devices	12	
CTV1	Security	4	
CJV1	Database I	4	
CRV1	Networks	4	
C220	Operating Systems I	3	
C221	Operating Systems II	3	
C299	Designing Customized Security	6	
TPV1	Project Management	6	
<b>Non Transferable</b>			
SBT1	Technical Writing	3	
RGT1	IT -Security Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	11	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	11	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: **IT Certifications** *\*Note that all certifications, degrees or courses must have been completed within five years of start date or as determined valid by certifying vendor (if date is less than 5 years).*

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.

## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology – Security Emphasis*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft, CompTIA, Cisco, and CIW to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

## Information Technology Fundamentals

### IT Fundamentals I

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

### IT Fundamentals I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

## **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

### **IT Foundations**

CompTIA A+ certification exam (220-801)

## **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.*

- *The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.*
- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*

- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*
- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

## **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

## **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing



## **Introduction to Probability and Statistics**

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

### **Introduction to Probability and Statistics**

Proctored, computer-based objective assessment

## **Elements of Effective Communication**

*This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### **Elements of Effective Communication**

Proctored, computer-based objective assessment

### **Application of Effective Communication**

Performance assessment that includes writing

## **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

## Geography

Proctored, computer-based objective exam

## Finite Mathematics

*Included in this course are the following main topics: proofs, set theory, logic, number theory, mathematical systems, modular arithmetic, and graph theory. It covers the following competencies:*

- *The graduate applies the fundamental ideas of discrete mathematics including logic, set theory, and graph theory in formulating and solving problems.*
- *The graduate demonstrates computational proficiency with real numbers and recognizes the properties of the real number system and its subsets.*
- *The graduate represents numbers in different forms, recognizes relationships among numbers and number systems, deduces the meanings of operations, and demonstrates a conceptual understanding of numbers.*

## Finite Mathematics

Proctored, computer-based objective assessment

## College Algebra

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

## College Algebra

Proctored, computer-based objective assessment

## **Integrated Natural Sciences**

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*
- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*
- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

## **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

## **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

#### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

#### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

#### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

#### **Web Development Fundamentals**

## **Web Systems and Technologies**

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

### **Web Technologies**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

## **Windows OS/Server Administration Fundamentals**

### **Operating System Fundamentals**

*This course focuses on operating system configurations, installing and upgrading client systems, managing applications, managing files, folders, and devices, and understanding operating system maintenance. The Operating Systems Fundamentals course is for current and aspiring information technology professionals who want to learn the basics of operating systems. This assessment will help students master installation, configuration, and troubleshooting of one of the world's leading operating systems: Windows 7. Windows 7 is widely used in different industries and provides robust functionality that was not previously included by any client operating systems developed by Microsoft. Mastering the basics of this operating system will help students become an expert in information technology and a savvy user. This course covers the following competencies:*

- *The graduate analyzes the purpose and functionality of various operating system configuration options.*
- *The graduate applies the processes and principles necessary for installing and upgrading client systems.*
- *The graduate applies the processes and principles necessary for managing operating system applications, services, and users.*
- *The graduate applies the processes and principles necessary for managing files and folders in a given operating system environment.*
- *The graduate analyzes the principles and processes associated with the management of devices.*

- *The graduate applies strategies and tools for maintaining a given operating system.*

### **Windows OS Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## **Networks**

### **Networks**

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Operating Systems**

### **Operating Systems I**

*This course focuses on system architecture, installation and package management, GNU and Unix commands, devices, filesystems and filesystem hierarchy standard. It covers the following competencies:*

- *The graduate can install and configure a specified computer operating system.*
- *The graduate can implement and manage the administration of network.*
- *The graduate can implement, manage, monitor, and troubleshoot hardware devices and drivers.*

## Operating Systems I

CompTIA Linux+ certification exam (LX0-101)

## Operating Systems II

*This course focuses on shells, scripting and data managements, user interfaces and desktops, administrative tasks, essential system services, networking fundamentals and security. IT covers the following competencies:*

- *The graduate can monitor and optimize system performance and reliability.*
- *The graduate can configure and troubleshoot the desktop environment.*
- *The graduate can implement, manage, and troubleshoot network protocols and services.*
- *The graduate can configure, manage, and troubleshoot security.*

## Operating Systems II

Proctored, computer-based objective assessment

CompTIA Linux+ certification exam (LX0-102)

# Security

## Security

*This course covers the following competencies:*

- *The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.*
- *The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.*
- *The graduate identifies security needs and recommends appropriate security practices for network infrastructure.*
- *The graduate identifies and explains the role of encryption in network security.*
- *The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.*
- *The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.*

## Security

Proctored at an authorized Prometric Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## Designing Customized Security

*Designing Customized Security outlines the sequence of learning activities to help students develop competence in the subject area of securing networks, which deals specifically with Cisco networks. It prepares students for the Cisco 640-553 IINS certification exam. This course covers the following competencies:*



- *The graduate identifies technical and security issues, and creates conceptual designs for network infrastructure security.*
- *The graduate creates logical conceptual designs for network infrastructure security.*
- *The graduate creates physical designs for network infrastructure security.*
- *The graduate designs access control strategies for various types of data.*
- *The graduate creates physical designs for client infrastructure security.*

### **Designing Customized Security (CNV1)**

Proctored at an authorized Pearson Vue Testing Center, computer-based Cisco CCNA Security (IINS 640-553) exam.

## **Databases**

### **Database I**

*This course covers the following competencies:*

- *The graduate distinguishes between basic database terms and concepts, their usage, and the types of database languages.*
- *The graduate reviews and selects appropriate database designs, and identifies design solutions that address application needs.*
- *The graduate applies normalization techniques in database design.*
- *The graduate follows appropriate database design best practices when creating conceptual, logical, enterprise, and physical database design models.*
- *The graduate describes appropriate Structured Query Language (SQL) concepts, and applies these concepts in given scenarios.*
- *The graduate uses relational algebra to perform database operations.*
- *The graduate recommends appropriate security-related configuration activities on database systems.*

### **Database I**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW v5 Database Design Specialist (1D0-541) exam

## **Software Development**

### **Software Development Fundamentals**

*This course focuses on the fundamentals of core programming, object-oriented programming, software development, web applications, desktop applications and user interfaces, and databases. It covers the following competencies:*

- *The graduate analyzes core elements and tools used in the design and trace of computer programs.*
- *The graduate applies the key principles of object-oriented programming.*

- *The graduate applies lifecycle management activities to the development and testing of software applications.*
- *The graduate applies core elements and tools for developing Web applications.*
- *The graduate applies fundamental principles, concepts, and tools used in the development of desktop applications and user interfaces.*
- *The graduate applies fundamental principles, concepts, and tools used in the development and management of relational databases.*

### **Software Development Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Software Development Fundamentals (98-361) exam

## **Interconnecting Network Devices**

### **Interconnecting Network Devices**

*These courses cover skills and concepts to include features and functions of networking components, knowledge, and skills needed to install, configure, and troubleshoot basic networking hardware protocols and services. Additionally, concepts including media and topologies, protocols, standards, network implementation, and network support are covered.*

*This course covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Fundamentals of Interconnecting Network Devices**

Interconnection Cisco Networking Devices Part I Exam (ICND1, 640-822)

### **Interconnecting Network Devices**

Interconnection Cisco Networking Devices Part II Exam (ICND2, 640-816)

## **Project Management**

### **Project Management**

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and*

risk is balanced by thorough coverage of best practices in managing people and resources. Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:

- The graduate describes and explains key components of project plans.
- The graduate creates a project plan.
- The graduate implements, controls, and coordinates projects according to project plans.
- The graduate explains the strategies and processes of project closure, acceptance, and delivery.

### **Project Management**

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## **Leadership and Management**

### **Organizational Behavior and Management**

This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

### **Principles of Management**

This course addresses strategic planning, total quality, entrepreneurship, conflict and change, human resource management, diversity, and organizational structure. It covers this competency:

- The graduate can explain the strategic planning process.

### **Principles of Management**

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis. It includes a work product specified in consultation with and with the approval of the mentor. It may be a project, a set of policy recommendations, a business plan, a marketing plan, action research, a strategic plan, a product, or a service.

### IT Security Capstone Project

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email **[studentservices@wgu.edu](mailto:studentservices@wgu.edu)**. We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT**. To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [\*\*servicedesk@wgu.edu\*\*](mailto:servicedesk@wgu.edu).

For the most current information regarding WGU support services, please visit the “Help” tab on the Student Portal at [\*\*http://my.wgu.edu\*\*](http://my.wgu.edu).



# Del Mar College AAS, Computer Information Systems - Digital Media

(Please find transferable credits on page 7.)

## *Bachelor of Science in* **Information Technology, Software Emphasis**

*The Bachelor of Science in Information Technology (IT) provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad, collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of four domains of study: IT fundamentals, software, networks and IT project management. There are eight areas of study (sub-domains) that students master including IT fundamentals, operating systems, software, networks, database, web systems, security, and project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project.*

*Students seeking the BS IT—Software Emphasis demonstrate additional competencies in this area by obtaining the Java Standard Edition 6 Programmer certification and passing the CIW Perl Fundamentals Exam. Students who have passed these prior to enrollment will have the requirement cleared.*

# Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.



Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page.

Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY—SOFTWARE EMPHASIS

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	ENG 1301
TCP1	English Composition II	3	Requirement Satisfied
C132	Elements & Applications of Effective Communication	3	SPCH 1321
AGC1	Foundations of College Mathematics	3	Mathematics
C277	Finite Mathematics	4	Requirement Satisfied
C278	College Algebra	4	Requirement Satisfied
CJC1	Introduction to Probability and Statistics	3	Requirement Satisfied
INC1	Introduction to Biology with Lab	4	Requirement Satisfied
C164	Introduction to Physics	4	Requirement Satisfied
IWC1	Literature, Arts and Humanities	2	ARTS 1311
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	Requirement Satisfied
CLC1	Reasoning and Problem Solving	3	Requirement Satisfied
	Total Potential General Education Units:	41	
	Total Actual General Education Units Awarded to Student:	39	
Information Technology Core			
WV1	IT Fundamentals I	3	Requirement Satisfied
C393	IT Fundamentals II	4	ITSC 1301
C394	IT Applications	4	ITSC 1305
EUP1/EUC1	Web Development Fundamentals	3	ITSC 2302 or 2313
DHV1	Windows OS Fundamentals	3	Requirement Satisfied
DJV1	Software Development Fundamentals	4	IMED 2305
DEV1	Security Fundamentals	3	Requirement Satisfied
	Total Potential Information Technology Core Units:	24	
	Total Actual Information Technology Core Units Awarded to Student:	24	
	Total Potential Transfer Units of Gen-Ed and Core:	65	

Additional Transfers			
BNC1	Organizational Behavior and Leadership	3	
EDV1	Software I	6	
WPV1	Software II	3	
C298	Web Programming	6	
CUV1	Web Technologies	4	
CTV1	Security	4	
TXC1/TXP1	Introduction to Programming	4	
TYC1/TYP1	Object Oriented Design and Development	4	
CJV1	Database I	4	
CRV1	Networks	4	
TPV1	Project Management	6	
Non Transferable			
SBT1	Technical Writing	3	
RHT1	IT - Software Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	63	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	63	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [IT Certifications](#)

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.

## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology – Software Emphasis*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft, CompTIA, Oracle, and CIW to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem-solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

## Information Technology Fundamentals

### IT Fundamentals I

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

### IT Fundamentals I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)



## **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

### **IT Foundations**

CompTIA A+ certification exam (220-801)

## **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.*

- *The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.*
- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*

- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*
- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

## **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

## **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

## Introduction to Probability and Statistics

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

### Introduction to Probability and Statistics

Proctored, computer-based objective assessment

## Elements of Effective Communication

*Elements of Effective Communication introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### Elements of Effective Communication

Proctored, computer-based objective assessment

### Application of Effective Communication

Performance assessment that includes writing

## Finite Mathematics

*Included in this course are the following main topics: proofs, set theory, logic, number theory, mathematical systems, modular arithmetic, and graph theory. It covers the following competencies:*

- *The graduate applies the fundamental ideas of discrete mathematics including logic, set theory, and graph theory in formulating and solving problems.*

- *The graduate demonstrates computational proficiency with real numbers and recognizes the properties of the real number system and its subsets.*
- *The graduate represents numbers in different forms, recognizes relationships among numbers and number systems, deduces the meanings of operations, and demonstrates a conceptual understanding of numbers.*

### **Finite Mathematics**

Proctored, computer-based objective assessment

### **College Algebra**

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### **College Algebra**

Proctored, computer-based objective assessment

### **Integrated Natural Sciences**

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*

- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*
- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

### **Geography**



## **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*



### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

### **Web Development Fundamentals**

Proctored, computer-based objective assessment

## **Web Systems and Technologies**

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

### **Web Technologies**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

## **Web Programming**

*This course focuses on applying characteristics and features of web programming languages, creating, modifying, and utilizing variables and data, decision structures, understanding functions, methods, properties, and events, client side web programming language, custom web programming language objects, controlling windows in a web programming language. It covers the following competencies:*

- *The graduate applies characteristics and features of Web programming languages.*
- *The graduate demonstrates the ability to create, modify, and utilize variables and data.*
- *The graduate demonstrates understanding of decision structures.*
- *The graduate demonstrates understanding of functions, methods, properties, and events.*
- *The graduate demonstrates understanding of client side Web programming language.*
- *The graduate demonstrates understanding of custom Web programming language objects.*
- *The graduate demonstrates understanding of how to control windows in a Web programming language.*

## Web Programming

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW JavaScript Specialist exam (1D0-635)

# Software Development

## Software Development Fundamentals

*This course focuses on the fundamentals of core programming, object-oriented programming, software development, web applications, desktop applications and user interfaces, and databases. It covers the following competencies:*

- *The graduate analyzes core elements and tools used in the design and trace of computer programs.*
- *The graduate applies the key principles of object-oriented programming.*
- *The graduate applies lifecycle management activities to the development and testing of software applications.*
- *The graduate applies core elements and tools for developing Web applications.*
- *The graduate applies fundamental principles, concepts, and tools used in the development of desktop applications and user interfaces.*
- *The graduate applies fundamental principles, concepts, and tools used in the development and management of relational databases.*

## Software Development Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Software Development Fundamentals (98-361) exam

# Networks

## Networks

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*

- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Windows OS/Server Administration Fundamentals**

### **Operating System Fundamentals**

*This course focuses on operating system configurations, installing and upgrading client systems, managing applications, managing files, folders, and devices, and understanding operating system maintenance. The Operating Systems Fundamentals course is for current and aspiring information technology professionals who want to learn the basics of operating systems. This assessment will help students master installation, configuration, and troubleshooting of one of the world's leading operating systems: Windows 7. Windows 7 is widely used in different industries and provides robust functionality that was not previously included by any client operating systems developed by Microsoft. Mastering the basics of this operating system will help students become an expert in information technology and a savvy user. This course covers the following competencies:*

- *The graduate analyzes the purpose and functionality of various operating system configuration options.*
- *The graduate applies the processes and principles necessary for installing and upgrading client systems.*
- *The graduate applies the processes and principles necessary for managing operating system applications, services, and users.*
- *The graduate applies the processes and principles necessary for managing files and folders in a given operating system environment.*
- *The graduate analyzes the principles and processes associated with the management of devices.*
- *The graduate applies strategies and tools for maintaining a given operating system.*

### **Windows OS Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## **Security**

## Security Fundamentals

*This course focuses on security layers, operating systems security, auditing policies, network security, client security software, and server security software. It covers the following competencies:*

- *The graduate applies security measures appropriate to the core goals of an information security program.*
- *The graduate applies fundamental authentication and authorization methods.*
- *The graduate applies security auditing methods.*
- *The graduate selects appropriate network security technologies to secure a network infrastructure from common threats.*
- *The graduate analyzes appropriate methods for securing clients.*
- *The graduate analyzes appropriate methods for securing servers.*

### Security Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Security Fundamentals (98-367) exam

## Security

*This course focuses on basic concepts of security and security threats; recommending security procedures and controlling access by authenticating users and groups; identifying security needs and recommending appropriate security practices and strategies; encryption in network security; procedures for organizational operations; and evaluating risks associated with network security and recommending monitoring strategies and methods. It covers the following competencies:*

- *The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.*
- *The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.*
- *The graduate identifies security needs and recommends appropriate security practices for network infrastructure.*
- *The graduate identifies and explains the role of encryption in network security.*
- *The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.*
- *The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.*

### Security

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## Leadership and Management

## Organizational Behavior and Management

*This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.*

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

## Programming

### **Introduction to Programming**

*These courses cover the following competencies:*

- *The graduate develops working programs that use appropriate control structures and accurately evaluates execution paths in program code.*
- *The graduate designs and develops algorithms for problem solving and implements those algorithms using appropriate program code.*
- *The graduate develops working programs that use appropriate data structures for problem solving.*

### **Project in Introduction to Programming**

Performance assessment that includes a demonstration of introductory-level Java programming.

### **Introduction to Programming**

Proctored, computer-based objective assessment

## Databases

### **Database I**

*This course covers the following competencies:*

- *The graduate distinguishes between basic database terms and concepts, their usage, and the types of database languages.*
- *The graduate reviews and selects appropriate database designs, and identifies design solutions that address application needs.*
- *The graduate applies normalization techniques in database design.*
- *The graduate follows appropriate database design best practices when creating conceptual, logical, enterprise, and physical database design models.*
- *The graduate describes appropriate Structured Query Language (SQL) concepts, and applies these concepts in given scenarios.*
- *The graduate uses relational algebra to perform database operations.*
- *The graduate recommends appropriate security-related configuration activities on database systems.*

#### **Database I**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW v5 Database Design Specialist (1D0-541) exam

## **Object-Oriented Design and Development**

### **Introduction to Object-Oriented Design and Development**

*The competencies covered in these courses are:*

- *The graduate applies object-oriented concepts, develops object-oriented designs, and uses object-oriented programming techniques.*
- *The graduate designs and develops object-oriented solutions that demonstrate appropriate use of inheritance and polymorphism.*
- *The graduate develops and interprets Unified Modeling Language diagrams that model object-oriented designs and develops and executes object-oriented software test cases.*
- *The graduate applies strategies to create programs that make use of collections and generics for manipulating data.*

#### **Project in Introduction to Object-Oriented Design and Development**

This is a culminating activity that results in the student developing one or more Java applications with documentation.

#### **Introduction to Object-Oriented Design and Development**

Proctored, computer-based objective assessment

## **Project Management**

### **Project Management**

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and risk is balanced by thorough coverage of best practices in managing people and resources.*

Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:

- The graduate describes and explains key components of project plans.
- The graduate creates a project plan.
- The graduate implements, controls, and coordinates projects according to project plans.
- The graduate explains the strategies and processes of project closure, acceptance, and delivery.

### **Project Management**

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## **Software**

### **Software I**

This course focuses on skills and concepts students need to know, to understand, and to apply object-oriented concepts in the Java programming. It covers the following competencies:

- The graduate develops and uses classes, interfaces, and variables in code development.
- The graduate uses object-oriented concepts and programming techniques to develop applications that are flexible and maintainable.
- The graduate applies appropriate control structures to develop robust applications.
- The graduate uses appropriate Application Programming Interface (API) classes and interfaces to perform efficient string, pattern, and stream processing.
- The graduate applies concepts to understand and implement the concepts of inheritance
- The graduate applies concepts to implement and handle exceptions in the Java Programming Environment.

### **Software I**

Proctored at an authorized Pearson Vue Testing Center, computer-based Oracle Certified Associate, Java SE 7 Programmer (1Z0-803)

### **Software II**

This course focuses on skills and concepts students need to know, to understand, and write Perl scripts. It covers the following competencies:

- The graduate demonstrates the basics of dynamic programming.
- The graduate manipulates complex variables and regular expressions.
- The graduate writes code that uses flow control.
- The graduate uses object-oriented concepts to create flexible and maintainable programs.

### **Software II**



## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis. It includes a work product specified in consultation with and with the approval of the mentor. It may be a project, a set of policy recommendations, a business plan, a marketing plan, action research, a strategic plan, a product, or a service.

### IT Software Capstone Project

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email **[studentservices@wgu.edu](mailto:studentservices@wgu.edu)**. We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT**. To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [\*\*servicedesk@wgu.edu\*\*](mailto:servicedesk@wgu.edu). For the most current information regarding WGU support services, please visit the “Help” tab on the Student Portal at [\*\*http://my.wgu.edu\*\*](http://my.wgu.edu).



# Del Mar College Certificate, Digital Media Advanced

(Please find transferable credits on page 7.)

## *Bachelor of Science in* **Information Technology, Software Emphasis**

*The Bachelor of Science in Information Technology (IT) provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad, collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of four domains of study: IT fundamentals, software, networks and IT project management. There are eight areas of study (sub-domains) that students master including IT fundamentals, operating systems, software, networks, database, web systems, security, and project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project.*

*Students seeking the BS IT—Software Emphasis demonstrate additional competencies in this area by obtaining the Java Standard Edition 6 Programmer certification and passing the CIW Perl Fundamentals Exam. Students who have passed these prior to enrollment will have the requirement cleared.*

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page.



Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY—SOFTWARE EMPHASIS

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	
TCP1	English Composition II	3	
C132	Elements & Applications of Effective Communication	3	
AGC1	Foundations of College Mathematics	3	
C277	Finite Mathematics	4	
C278	College Algebra	4	
CJC1	Introduction to Probability and Statistics	3	
INC1	Introduction to Biology with Lab	4	
C164	Introduction to Physics	4	
IWC1	Literature, Arts and Humanities	2	
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	
CLC1	Reasoning and Problem Solving	3	
	Total Potential General Education Units:	41	
	Total Actual General Education Units Awarded to Student:		
Information Technology Core			
WV1	IT Fundamentals I	3	
C393	IT Fundamentals II	4	
C394	IT Applications	4	
EUP1/EUC1	Web Development Fundamentals	3	ITSE 2302
DHV1	Windows OS Fundamentals	3	
DJV1	Software Development Fundamentals	4	IMED 2305
DEV1	Security Fundamentals	3	
	Total Potential Information Technology Core Units:	24	
	Total Actual Information Technology Core Units Awarded to Student:	7	
	Total Potential Transfer Units of Gen-Ed and Core:	65	

Additional Transfers			
BNC1	Organizational Behavior and Leadership	3	
EDV1	Software I	6	
WPV1	Software II	3	
C298	Web Programming	6	
CUV1	Web Technologies	4	
CTV1	Security	4	
TXC1/TXP1	Introduction to Programming	4	
TYC1/TYP1	Object Oriented Design and Development	4	
CJV1	Database I	4	
CRV1	Networks	4	
TPV1	Project Management	6	
Non Transferable			
SBT1	Technical Writing	3	
RHT1	IT - Software Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	7	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	7	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [IT Certifications](#) \*Note that all certifications, degrees or courses must have been completed within five years of start date or as determined valid by certifying vendor (if date is less than 5 years).

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.

## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology – Software Emphasis*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft, CompTIA, Oracle, and CIW to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem-solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

## Information Technology Fundamentals

### IT Fundamentals I

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

### IT Fundamentals I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

## **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

### **IT Foundations**

CompTIA A+ certification exam (220-801)

## **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.*

- *The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.*
- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*

- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*
- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

## **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

## **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing



## Introduction to Probability and Statistics

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

### Introduction to Probability and Statistics

Proctored, computer-based objective assessment

## Elements of Effective Communication

*Elements of Effective Communication introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### Elements of Effective Communication

Proctored, computer-based objective assessment

### Application of Effective Communication

Performance assessment that includes writing

## Finite Mathematics

*Included in this course are the following main topics: proofs, set theory, logic, number theory, mathematical systems, modular arithmetic, and graph theory. It covers the following competencies:*

- *The graduate applies the fundamental ideas of discrete mathematics including logic, set theory, and graph theory in formulating and solving problems.*

- *The graduate demonstrates computational proficiency with real numbers and recognizes the properties of the real number system and its subsets.*
- *The graduate represents numbers in different forms, recognizes relationships among numbers and number systems, deduces the meanings of operations, and demonstrates a conceptual understanding of numbers.*

### **Finite Mathematics**

Proctored, computer-based objective assessment

## **College Algebra**

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### **College Algebra**

Proctored, computer-based objective assessment

## **Integrated Natural Sciences**

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*

- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*
- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

### **Geography**

## Literature, Arts, and the Humanities

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

### Literature, Arts, and the Humanities

Proctored, computer-based objective exam

### Literature, Arts, and the Humanities: Analysis and Interpretation

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

## Web Development

### Web Development Fundamentals

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

### **Web Development Fundamentals**

Proctored, computer-based objective assessment

## **Web Systems and Technologies**

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

### **Web Technologies**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

## **Web Programming**

*This course focuses on applying characteristics and features of web programming languages, creating, modifying, and utilizing variables and data, decision structures, understanding functions, methods, properties, and events, client side web programming language, custom web programming language objects, controlling windows in a web programming language. It covers the following competencies:*

- *The graduate applies characteristics and features of Web programming languages.*
- *The graduate demonstrates the ability to create, modify, and utilize variables and data.*
- *The graduate demonstrates understanding of decision structures.*
- *The graduate demonstrates understanding of functions, methods, properties, and events.*
- *The graduate demonstrates understanding of client side Web programming language.*
- *The graduate demonstrates understanding of custom Web programming language objects.*
- *The graduate demonstrates understanding of how to control windows in a Web programming language.*

## Web Programming

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW JavaScript Specialist exam (1D0-635)

# Software Development

## Software Development Fundamentals

*This course focuses on the fundamentals of core programming, object-oriented programming, software development, web applications, desktop applications and user interfaces, and databases. It covers the following competencies:*

- *The graduate analyzes core elements and tools used in the design and trace of computer programs.*
- *The graduate applies the key principles of object-oriented programming.*
- *The graduate applies lifecycle management activities to the development and testing of software applications.*
- *The graduate applies core elements and tools for developing Web applications.*
- *The graduate applies fundamental principles, concepts, and tools used in the development of desktop applications and user interfaces.*
- *The graduate applies fundamental principles, concepts, and tools used in the development and management of relational databases.*

## Software Development Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Software Development Fundamentals (98-361) exam

# Networks

## Networks

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*

- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Windows OS/Server Administration Fundamentals**

### **Operating System Fundamentals**

*This course focuses on operating system configurations, installing and upgrading client systems, managing applications, managing files, folders, and devices, and understanding operating system maintenance. The Operating Systems Fundamentals course is for current and aspiring information technology professionals who want to learn the basics of operating systems. This assessment will help students master installation, configuration, and troubleshooting of one of the world's leading operating systems: Windows 7. Windows 7 is widely used in different industries and provides robust functionality that was not previously included by any client operating systems developed by Microsoft. Mastering the basics of this operating system will help students become an expert in information technology and a savvy user. This course covers the following competencies:*

- *The graduate analyzes the purpose and functionality of various operating system configuration options.*
- *The graduate applies the processes and principles necessary for installing and upgrading client systems.*
- *The graduate applies the processes and principles necessary for managing operating system applications, services, and users.*
- *The graduate applies the processes and principles necessary for managing files and folders in a given operating system environment.*
- *The graduate analyzes the principles and processes associated with the management of devices.*
- *The graduate applies strategies and tools for maintaining a given operating system.*

### **Windows OS Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## **Security**



## Security Fundamentals

*This course focuses on security layers, operating systems security, auditing policies, network security, client security software, and server security software. It covers the following competencies:*

- *The graduate applies security measures appropriate to the core goals of an information security program.*
- *The graduate applies fundamental authentication and authorization methods.*
- *The graduate applies security auditing methods.*
- *The graduate selects appropriate network security technologies to secure a network infrastructure from common threats.*
- *The graduate analyzes appropriate methods for securing clients.*
- *The graduate analyzes appropriate methods for securing servers.*

### Security Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Security Fundamentals (98-367) exam

## Security

*This course focuses on basic concepts of security and security threats; recommending security procedures and controlling access by authenticating users and groups; identifying security needs and recommending appropriate security practices and strategies; encryption in network security; procedures for organizational operations; and evaluating risks associated with network security and recommending monitoring strategies and methods. It covers the following competencies:*

- *The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.*
- *The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.*
- *The graduate identifies security needs and recommends appropriate security practices for network infrastructure.*
- *The graduate identifies and explains the role of encryption in network security.*
- *The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.*
- *The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.*

### Security

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## Leadership and Management

## Organizational Behavior and Management

*This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.*

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

## Programming

### **Introduction to Programming**

*These courses cover the following competencies:*

- *The graduate develops working programs that use appropriate control structures and accurately evaluates execution paths in program code.*
- *The graduate designs and develops algorithms for problem solving and implements those algorithms using appropriate program code.*
- *The graduate develops working programs that use appropriate data structures for problem solving.*

### **Project in Introduction to Programming**

Performance assessment that includes a demonstration of introductory-level Java programming.

### **Introduction to Programming**

Proctored, computer-based objective assessment

## Databases

### **Database I**

*This course covers the following competencies:*

- *The graduate distinguishes between basic database terms and concepts, their usage, and the types of database languages.*
- *The graduate reviews and selects appropriate database designs, and identifies design solutions that address application needs.*
- *The graduate applies normalization techniques in database design.*
- *The graduate follows appropriate database design best practices when creating conceptual, logical, enterprise, and physical database design models.*
- *The graduate describes appropriate Structured Query Language (SQL) concepts, and applies these concepts in given scenarios.*
- *The graduate uses relational algebra to perform database operations.*
- *The graduate recommends appropriate security-related configuration activities on database systems.*

#### **Database I**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW v5 Database Design Specialist (1D0-541) exam

## **Object-Oriented Design and Development**

### **Introduction to Object-Oriented Design and Development**

*The competencies covered in these courses are:*

- *The graduate applies object-oriented concepts, develops object-oriented designs, and uses object-oriented programming techniques.*
- *The graduate designs and develops object-oriented solutions that demonstrate appropriate use of inheritance and polymorphism.*
- *The graduate develops and interprets Unified Modeling Language diagrams that model object-oriented designs and develops and executes object-oriented software test cases.*
- *The graduate applies strategies to create programs that make use of collections and generics for manipulating data.*

#### **Project in Introduction to Object-Oriented Design and Development**

This is a culminating activity that results in the student developing one or more Java applications with documentation.

#### **Introduction to Object-Oriented Design and Development**

Proctored, computer-based objective assessment

## **Project Management**

### **Project Management**

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and risk is balanced by thorough coverage of best practices in managing people and resources.*

Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:

- The graduate describes and explains key components of project plans.
- The graduate creates a project plan.
- The graduate implements, controls, and coordinates projects according to project plans.
- The graduate explains the strategies and processes of project closure, acceptance, and delivery.

### **Project Management**

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## **Software**

### **Software I**

This course focuses on skills and concepts students need to know, to understand, and to apply object-oriented concepts in the Java programming. It covers the following competencies:

- The graduate develops and uses classes, interfaces, and variables in code development.
- The graduate uses object-oriented concepts and programming techniques to develop applications that are flexible and maintainable.
- The graduate applies appropriate control structures to develop robust applications.
- The graduate uses appropriate Application Programming Interface (API) classes and interfaces to perform efficient string, pattern, and stream processing.
- The graduate applies concepts to understand and implement the concepts of inheritance
- The graduate applies concepts to implement and handle exceptions in the Java Programming Environment.

### **Software I**

Proctored at an authorized Pearson Vue Testing Center, computer-based Oracle Certified Associate, Java SE 7 Programmer (1Z0-803)

### **Software II**

This course focuses on skills and concepts students need to know, to understand, and write Perl scripts. It covers the following competencies:

- The graduate demonstrates the basics of dynamic programming.
- The graduate manipulates complex variables and regular expressions.
- The graduate writes code that uses flow control.
- The graduate uses object-oriented concepts to create flexible and maintainable programs.

### **Software II**

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis. It includes a work product specified in consultation with and with the approval of the mentor. It may be a project, a set of policy recommendations, a business plan, a marketing plan, action research, a strategic plan, a product, or a service.

### IT Software Capstone Project

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email **[studentservices@wgu.edu](mailto:studentservices@wgu.edu)**. We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT**. To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [\*\*servicedesk@wgu.edu\*\*](mailto:servicedesk@wgu.edu). For the most current information regarding WGU support services, please visit the “Help” tab on the Student Portal at [\*\*http://my.wgu.edu\*\*](http://my.wgu.edu).



# Del Mar College Certificate, Digital Media Essentials

(Please find transferable credits on page 7.)

## *Bachelor of Science in* **Information Technology, Software Emphasis**

*The Bachelor of Science in Information Technology (IT) provides a solid foundation in computer information systems and technologies, including programming, web systems, project management, networks, operating systems, databases, and security. In addition to the IT content, the degree program includes a broad, collegiate-level education. The program is primarily designed for those who have some technical knowledge and are ready to move to increased levels of expertise and responsibility in the information technology field. The IT component of the Bachelor of Science program consists of four domains of study: IT fundamentals, software, networks and IT project management. There are eight areas of study (sub-domains) that students master including IT fundamentals, operating systems, software, networks, database, web systems, security, and project management. At the end of the program, students develop a comprehensive portfolio and complete a capstone project.*

*Students seeking the BS IT—Software Emphasis demonstrate additional competencies in this area by obtaining the Java Standard Edition 6 Programmer certification and passing the CIW Perl Fundamentals Exam. Students who have passed these prior to enrollment will have the requirement cleared.*



## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU’s Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU’s competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page.

Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, INFORMATION TECHNOLOGY—SOFTWARE EMPHASIS

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	
TCP1	English Composition II	3	
C132	Elements & Applications of Effective Communication	3	
AGC1	Foundations of College Mathematics	3	
C277	Finite Mathematics	4	
C278	College Algebra	4	
CJC1	Introduction to Probability and Statistics	3	
INC1	Introduction to Biology with Lab	4	
C164	Introduction to Physics	4	
IWC1	Literature, Arts and Humanities	2	
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	
CLC1	Reasoning and Problem Solving	3	
	Total Potential General Education Units:	41	
	Total Actual General Education Units Awarded to Student:		
Information Technology Core			
WV1	IT Fundamentals I	3	
C393	IT Fundamentals II	4	ITSC 1301
C394	IT Applications	4	ITSC 1305
EUP1/EUC1	Web Development Fundamentals	3	ITSE 2313
DHV1	Windows OS Fundamentals	3	
DJV1	Software Development Fundamentals	4	
DEV1	Security Fundamentals	3	
	Total Potential Information Technology Core Units:	24	
	Total Actual Information Technology Core Units Awarded to Student:	11	
	Total Potential Transfer Units of Gen-Ed and Core:	65	

Additional Transfers			
BNC1	Organizational Behavior and Leadership	3	
EDV1	Software I	6	
WPV1	Software II	3	
C298	Web Programming	6	
CUV1	Web Technologies	4	
CTV1	Security	4	
TXC1/TXP1	Introduction to Programming	4	
TYC1/TYP1	Object Oriented Design and Development	4	
CJV1	Database I	4	
CRV1	Networks	4	
TPV1	Project Management	6	
Non Transferable			
SBT1	Technical Writing	3	
RHT1	IT - Software Capstone Written Project	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	11	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	11	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [IT Certifications](#) \*Note that all certifications, degrees or courses must have been completed within five years of start date or as determined valid by certifying vendor (if date is less than 5 years).

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.



## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

## *Areas of Study Within the Bachelor of Science in Information Technology – Software Emphasis*

The WGU Bachelor of Science in Information Technology program was developed in consultation with our IT Council, which is made up of industry experts representing all facets of the discipline from the high-tech business world to national research laboratories. The degree uses industry-endorsed certifications from Microsoft, CompTIA, Oracle, and CIW to validate a student's skill competency. Additionally, the competencies in quantitative literacy, language and communications, and problem-solving assure that the graduate has the well-rounded educational background that is required in today's challenging environment.

## Information Technology Fundamentals

### IT Fundamentals I

*This course focuses on networked resources, hardware and software for the Internet business, and web browser function, use, configuration, and customization. It covers the following competencies:*

- *The graduate demonstrates a basic working knowledge of networked resources.*
- *The graduate describes the role and basic functioning of hardware and software needed for Internet business.*
- *The graduate organizes and produces a simple but functioning website.*
- *The graduate demonstrates knowledge of web browser function, use, configuration, and customization.*

### IT Fundamentals I

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Foundations Associate exam (1D0-510)

## **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

### **IT Foundations**

CompTIA A+ certification exam (220-801)

## **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.*

- *The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.*
- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Foundations of College Mathematics**

*This course focuses on basic numeracy and calculation skills, basic algebra skills, basic geometry principles, and basic data and probability skills. It covers the following competencies:*

- *The student utilizes the operations, processes, and procedures of basic numeracy and calculation skills to solve quantitative problems in arithmetic and basic algebra.*
- *The student applies the operations, processes, and procedures of basic algebra to solve quantitative problems.*
- *The student utilizes the operations, processes, and procedures of basic geometry and measurement to solve problems in mathematics.*
- *The graduate evaluates quantitative data by interpreting statistical and graphic representations and solves basic probability problems.*

### **Foundations of College Mathematics**

Proctored, computer-based objective exam

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*

- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*
- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

## **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

## **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

## Introduction to Probability and Statistics

*This course covers the following competencies:*

- *The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.*
- *The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.*
- *The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.*
- *The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.*
- *The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.*
- *The graduate determines the probability of events using simulations, diagrams, and probability rules.*

### Introduction to Probability and Statistics

Proctored, computer-based objective assessment

## Elements of Effective Communication

*Elements of Effective Communication introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:*

- *The graduate applies foundational elements of effective communication.*
- *The graduate applies appropriate communication strategies in interpersonal and group contexts.*
- *The graduate demonstrates effective presentational communication strategies in a given context.*

### Elements of Effective Communication

Proctored, computer-based objective assessment

### Application of Effective Communication

Performance assessment that includes writing

## Finite Mathematics

*Included in this course are the following main topics: proofs, set theory, logic, number theory, mathematical systems, modular arithmetic, and graph theory. It covers the following competencies:*

- *The graduate applies the fundamental ideas of discrete mathematics including logic, set theory, and graph theory in formulating and solving problems.*

- *The graduate demonstrates computational proficiency with real numbers and recognizes the properties of the real number system and its subsets.*
- *The graduate represents numbers in different forms, recognizes relationships among numbers and number systems, deduces the meanings of operations, and demonstrates a conceptual understanding of numbers.*

### **Finite Mathematics**

Proctored, computer-based objective assessment

### **College Algebra**

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### **College Algebra**

Proctored, computer-based objective assessment

### **Integrated Natural Sciences**

*Integrated Natural Sciences explores the natural world through an integrated perspective and helps students begin to see and draw numerous connections among events in the natural world. Topics include the universe, the Earth, ecosystems and organisms. Students apply scientific concepts in the examination of natural science fundamentals. This course covers the following competencies:*

- *The graduate recognizes and analyzes various natural phenomena and applies natural science methods and approaches to these natural phenomena.*
- *The graduate examines fundamental concepts and theories in the natural sciences.*



- *The graduate analyzes the organization, interactions, and predictable processes of the universe.*
- *The graduate identifies and analyzes the organization, interactions, and processes of the Earth.*
- *The graduate analyzes the components, organization, interactions, and processes of ecosystems.*
- *The graduate recognizes and applies underlying principles of matter and chemical reactions to analyze the structure, organization, interactions, and processes of organisms.*

### **Integrated Natural Sciences**

Proctored, computer-based objective assessment

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*
- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

### **Geography**



## Literature, Arts, and the Humanities

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*
- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

### Literature, Arts, and the Humanities

Proctored, computer-based objective exam

### Literature, Arts, and the Humanities: Analysis and Interpretation

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

## Web Development

### Web Development Fundamentals

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

### **Web Development Fundamentals**

Proctored, computer-based objective assessment

## **Web Systems and Technologies**

*This course focuses on using and updating web client software, web page creation and programming languages, dynamic web page fundamentals: e-commerce infrastructure, and identifying suspicious network activity and selecting the appropriate strategy to counter it. It covers the following competencies:*

- *The graduate uses and updates web client software.*
- *The graduate creates web pages using specified markup and programming languages associated with client server systems.*
- *The graduate utilizes the popular tools used for dynamic web page creation.*
- *The graduate describes the core elements and supporting network infrastructure of an e-commerce design.*
- *The graduate identifies suspicious network activity and selects the appropriate strategy to counter it.*

### **Web Technologies**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW Web Design Specialist exam (1D0-520)

## **Web Programming**

*This course focuses on applying characteristics and features of web programming languages, creating, modifying, and utilizing variables and data, decision structures, understanding functions, methods, properties, and events, client side web programming language, custom web programming language objects, controlling windows in a web programming language. It covers the following competencies:*

- *The graduate applies characteristics and features of Web programming languages.*
- *The graduate demonstrates the ability to create, modify, and utilize variables and data.*
- *The graduate demonstrates understanding of decision structures.*
- *The graduate demonstrates understanding of functions, methods, properties, and events.*
- *The graduate demonstrates understanding of client side Web programming language.*
- *The graduate demonstrates understanding of custom Web programming language objects.*
- *The graduate demonstrates understanding of how to control windows in a Web programming language.*

## Web Programming

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW JavaScript Specialist exam (1D0-635)

# Software Development

## Software Development Fundamentals

*This course focuses on the fundamentals of core programming, object-oriented programming, software development, web applications, desktop applications and user interfaces, and databases. It covers the following competencies:*

- *The graduate analyzes core elements and tools used in the design and trace of computer programs.*
- *The graduate applies the key principles of object-oriented programming.*
- *The graduate applies lifecycle management activities to the development and testing of software applications.*
- *The graduate applies core elements and tools for developing Web applications.*
- *The graduate applies fundamental principles, concepts, and tools used in the development of desktop applications and user interfaces.*
- *The graduate applies fundamental principles, concepts, and tools used in the development and management of relational databases.*

## Software Development Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Software Development Fundamentals (98-361) exam

# Networks

## Networks

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*

- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### **Networks**

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

## **Windows OS/Server Administration Fundamentals**

### **Operating System Fundamentals**

*This course focuses on operating system configurations, installing and upgrading client systems, managing applications, managing files, folders, and devices, and understanding operating system maintenance. The Operating Systems Fundamentals course is for current and aspiring information technology professionals who want to learn the basics of operating systems. This assessment will help students master installation, configuration, and troubleshooting of one of the world's leading operating systems: Windows 7. Windows 7 is widely used in different industries and provides robust functionality that was not previously included by any client operating systems developed by Microsoft. Mastering the basics of this operating system will help students become an expert in information technology and a savvy user. This course covers the following competencies:*

- *The graduate analyzes the purpose and functionality of various operating system configuration options.*
- *The graduate applies the processes and principles necessary for installing and upgrading client systems.*
- *The graduate applies the processes and principles necessary for managing operating system applications, services, and users.*
- *The graduate applies the processes and principles necessary for managing files and folders in a given operating system environment.*
- *The graduate analyzes the principles and processes associated with the management of devices.*
- *The graduate applies strategies and tools for maintaining a given operating system.*

### **Windows OS Fundamentals**

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Windows Operating System Fundamentals (98-349) exam

## **Security**

## Security Fundamentals

*This course focuses on security layers, operating systems security, auditing policies, network security, client security software, and server security software. It covers the following competencies:*

- *The graduate applies security measures appropriate to the core goals of an information security program.*
- *The graduate applies fundamental authentication and authorization methods.*
- *The graduate applies security auditing methods.*
- *The graduate selects appropriate network security technologies to secure a network infrastructure from common threats.*
- *The graduate analyzes appropriate methods for securing clients.*
- *The graduate analyzes appropriate methods for securing servers.*

### Security Fundamentals

Proctored at an authorized Certiport Testing Center, computer-based Microsoft Technology Associate (MTA) Security Fundamentals (98-367) exam

## Security

*This course focuses on basic concepts of security and security threats; recommending security procedures and controlling access by authenticating users and groups; identifying security needs and recommending appropriate security practices and strategies; encryption in network security; procedures for organizational operations; and evaluating risks associated with network security and recommending monitoring strategies and methods. It covers the following competencies:*

- *The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.*
- *The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.*
- *The graduate identifies security needs and recommends appropriate security practices for network infrastructure.*
- *The graduate identifies and explains the role of encryption in network security.*
- *The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.*
- *The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.*

### Security

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Security+ exam (2011 edition)

## Leadership and Management

## Organizational Behavior and Management

*This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.*

### **Organizational Behavior and Leadership**

Proctored, computer-based objective exam

## Programming

### **Introduction to Programming**

*These courses cover the following competencies:*

- *The graduate develops working programs that use appropriate control structures and accurately evaluates execution paths in program code.*
- *The graduate designs and develops algorithms for problem solving and implements those algorithms using appropriate program code.*
- *The graduate develops working programs that use appropriate data structures for problem solving.*

### **Project in Introduction to Programming**

Performance assessment that includes a demonstration of introductory-level Java programming.

### **Introduction to Programming**

Proctored, computer-based objective assessment

## Databases

### **Database I**

*This course covers the following competencies:*



- *The graduate distinguishes between basic database terms and concepts, their usage, and the types of database languages.*
- *The graduate reviews and selects appropriate database designs, and identifies design solutions that address application needs.*
- *The graduate applies normalization techniques in database design.*
- *The graduate follows appropriate database design best practices when creating conceptual, logical, enterprise, and physical database design models.*
- *The graduate describes appropriate Structured Query Language (SQL) concepts, and applies these concepts in given scenarios.*
- *The graduate uses relational algebra to perform database operations.*
- *The graduate recommends appropriate security-related configuration activities on database systems.*

#### **Database I**

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based CIW v5 Database Design Specialist (1D0-541) exam

## **Object-Oriented Design and Development**

### **Introduction to Object-Oriented Design and Development**

*The competencies covered in these courses are:*

- *The graduate applies object-oriented concepts, develops object-oriented designs, and uses object-oriented programming techniques.*
- *The graduate designs and develops object-oriented solutions that demonstrate appropriate use of inheritance and polymorphism.*
- *The graduate develops and interprets Unified Modeling Language diagrams that model object-oriented designs and develops and executes object-oriented software test cases.*
- *The graduate applies strategies to create programs that make use of collections and generics for manipulating data.*

#### **Project in Introduction to Object-Oriented Design and Development**

This is a culminating activity that results in the student developing one or more Java applications with documentation.

#### **Introduction to Object-Oriented Design and Development**

Proctored, computer-based objective assessment

## **Project Management**

### **Project Management**

*This course focuses on skills and concepts students need to know to plan and implement projects. The project initiation and planning process is covered in-depth, culminating in the creation of a project schedule. Learning how to manage business concerns such as cost and risk is balanced by thorough coverage of best practices in managing people and resources.*



Students will also learn how to manage change and the steps necessary in closing a project. This course covers the following competencies:

- The graduate describes and explains key components of project plans.
- The graduate creates a project plan.
- The graduate implements, controls, and coordinates projects according to project plans.
- The graduate explains the strategies and processes of project closure, acceptance, and delivery.

### **Project Management**

Proctored at an authorized Pearson VueTesting Center, computer-based CompTIA Project+ 2009 exam

## **Software**

### **Software I**

This course focuses on skills and concepts students need to know, to understand, and to apply object-oriented concepts in the Java programming. It covers the following competencies:

- The graduate develops and uses classes, interfaces, and variables in code development.
- The graduate uses object-oriented concepts and programming techniques to develop applications that are flexible and maintainable.
- The graduate applies appropriate control structures to develop robust applications.
- The graduate uses appropriate Application Programming Interface (API) classes and interfaces to perform efficient string, pattern, and stream processing.
- The graduate applies concepts to understand and implement the concepts of inheritance
- The graduate applies concepts to implement and handle exceptions in the Java Programming Environment.

### **Software I**

Proctored at an authorized Pearson Vue Testing Center, computer-based Oracle Certified Associate, Java SE 7 Programmer (1Z0-803)

### **Software II**

This course focuses on skills and concepts students need to know, to understand, and write Perl scripts. It covers the following competencies:

- The graduate demonstrates the basics of dynamic programming.
- The graduate manipulates complex variables and regular expressions.
- The graduate writes code that uses flow control.
- The graduate uses object-oriented concepts to create flexible and maintainable programs.

### **Software II**

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone Project

The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis. It includes a work product specified in consultation with and with the approval of the mentor. It may be a project, a set of policy recommendations, a business plan, a marketing plan, action research, a strategic plan, a product, or a service.

### IT Software Capstone Project

The capstone project consists of a technical work product and a report that details various aspects of the product. The final product will also include a journal that contemporaneously describes the candidate's experience in developing the capstone. The topic of the capstone must be presented and approved by the student's mentor.

\*Requirements and instructions for completing the capstone can be obtained from the student's mentor.

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email **[studentservices@wgu.edu](mailto:studentservices@wgu.edu)**. We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT**. To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [\*\*servicedesk@wgu.edu\*\*](mailto:servicedesk@wgu.edu). For the most current information regarding WGU support services, please visit the “Help” tab on the Student Portal at [\*\*http://my.wgu.edu\*\*](http://my.wgu.edu).



# Del Mar College AAS, Computer Information Systems - Digital Media

(Please find transferable credits on page 7.)

## *Bachelor of Science in* **Software Development**

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## Orientation

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will "clear" through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may "clear" some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For



comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student’s WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12

units per term, for a student who has no transfer units would look similar to the one on the next page.

Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, SOFTWARE DEVELOPMENT

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	ENG 1301
TCP1	English Composition II	3	Requirement Satisfied
C132	Elements & Applications of Effective Communication	3	SPCH 1321
C278	College Algebra	4	Requirement Satisfied
CJC1	Introduction to Probability and Statistics	3	Requirement Satisfied
C164	Introduction to Physics	4	Requirement Satisfied
IWC1	Literature, Arts and Humanities	2	ARTS 1311
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	Requirement Satisfied
CLC1	Reasoning and Problem Solving	3	Requirement Satisfied
BNC1	Organizational Behavior and Leadership	3	Requirement Satisfied
	Total Potential General Education Units:	33	
	Total Actual General Education Units Awarded to Student:	31	
Information Technology Core			
C182	Introduction to IT	4	Requirement Satisfied
C393	IT Fundamentals II	4	ITSC 1301
C394	IT Applications	4	ITSC 1305
EUP1/EUC1	Web Development Fundamentals	3	ITSC 2302 or 2313
C173	Scripting and Programming - Foundations	3	Requirement Satisfied
C172	Network and Security - Foundations	3	Requirement Satisfied
C175	Data Management - Foundations	3	Requirement Satisfied
	Total Potential Information Technology Core Units:	24	
	Total Actual Information Technology Core Units Awarded to Student:	24	
	Total Potential Transfer Units of Gen-Ed and Core:	57	
Additional Transfers			
C169	Scripting and Programming - Applications	4	
C170	Data Management - Applications	4	

C178	Network and Security - Applications	4	
EDV1	Software I	6	
C195	Software II - Advanced Java Concepts	6	
C191	Operating Systems for Programmers	3	
CRV1	Networks	4	
C176	Business of IT - Project Management	4	
C179	Business of IT - Applications	4	
TYC1/TYP1	Object Oriented Design and Development	4	
<b>Non Transferable</b>			
C189	Data Structures	4	
C192	Data Management for Programmers	3	
C188	Software Engineering	4	
C193	Client-Server Application Development	3	
C196	Mobile Application Development	3	
SBT1	Technical Writing	3	
C199	Software Development Capstone	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	55	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	55	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: [\*\*IT Certifications\*\*](#)

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.

## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

# *Areas of Study Within the Bachelor of Science in Software Development*

## IT Fundamentals

### **Introduction to IT**

*This course introduces students to 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:*

- *The graduate describes IT as a discipline and discusses the history and future of computing as well as the currently used infrastructure.*
- *The graduate describes information technology systems and their role in converting data to organizational knowledge.*
- *The graduate identifies the role of different types of software in a computing environment and explains the fundamentals of software development.*
- *The graduate recognizes and describes functions of basic computer hardware components.*
- *The graduate describes the structure, function, and security associated with networks.*
- *The graduate identifies common software architectures, development techniques, and the relationship between software and its environment.*
- *The candidate explains the structure and function of databases.*
- *The graduate explains the role of technology in today's business environment and describes basic concepts of project management.*
- *The graduate evaluates ethical concerns involved in the use of technology.*

### **Introduction to IT**

## **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

## **IT Foundations**

CompTIA A+ certification exam (220-801)

## **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.
- The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.
- The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.
- The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.
- The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.
- The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.
- The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.
- The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- The graduate will describe and discuss the basic concepts of geography.



- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

### **Geography**

Proctored, computer-based objective exam

## **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

## **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

## Elements of Effective Communication

*Elements of Effective Communication* introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:

- The graduate applies foundational elements of effective communication.
- The graduate applies appropriate communication strategies in interpersonal and group contexts.
- The graduate demonstrates effective presentational communication strategies in a given context.

### Elements of Effective Communication

Proctored, computer-based objective assessment

### Application of Effective Communication

Performance assessment that includes writing

## Introduction to Probability and Statistics

*This course covers the following competencies:*

- The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.
- The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.
- The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.
- The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.
- The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.
- The graduate determines the probability of events using simulations, diagrams, and probability rules.

### Introduction to Probability and Statistics

Proctored, computer-based objective assessment

## College Algebra

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### **College Algebra**

Proctored, computer-based objective assessment

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

### **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*

- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

#### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

#### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

#### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

#### **Web Development Fundamentals**

Proctored, computer-based objective assessment

### **Introduction to Object-Oriented Design and Development**

*The competencies covered in these courses are:*

- *The graduate applies object-oriented concepts, develops object-oriented designs, and uses object-oriented programming techniques.*

- *The graduate designs and develops object-oriented solutions that demonstrate appropriate use of inheritance and polymorphism.*
- *The graduate develops and interprets Unified Modeling Language diagrams that model object-oriented designs and develops and executes object-oriented software test cases.*
- *The graduate applies strategies to create programs that make use of collections and generics for manipulating data.*

### **Project in Introduction to Object-Oriented Design and Development**

This is a culminating activity that results in the student developing one or more Java applications with documentation.

### **Introduction to Object-Oriented Design and Development**

Proctored, computer-based objective assessment

## **Data Management**

### **Data Management - Foundations**

*This course introduces students to the concepts and terminology used in the field of data management. They 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 will be included. This course covers the following competencies:*

- *The graduate demonstrates an understanding of data, databases, and data management.*
- *The graduate demonstrates an understanding of the concepts of the relational model of data.*
- *The graduate demonstrates an understanding of SQL concepts.*
- *The graduate demonstrates an understanding of the concepts involved in the modeling of data.*
- *The graduate demonstrates appropriate strategies to normalize data.*
- *The graduate demonstrates an understanding of the concepts involved in business intelligence and analytical processing.*
- *The graduate demonstrates a fundamental understanding of storage technologies.*

### **Data Management - Foundations**

Proctored, computer-based objective assessment

### **Data Management - Applications**

*This course covers conceptual data modeling and provides an introduction to MySQL. Students will learn how to create simple to complex SELECT queries including subqueries and joins, and will also learn how to use SQL to update and delete data. Topics covered in this course include exposure to MySQL; developing physical schemas; creating and modifying databases, tables,*

views, foreign keys/primary keys (FKs/PKs), and indexes; populating tables; and developing simple Select-From-Where (SFW) queries to complex 3+ table join queries. This course covers the following competencies:

- The graduate creates conceptual data models and translates them into physical schemas.
- The graduate creates Databases utilizing SQL Data Definition Language (DDL) in MySQL environment.
- The graduate creates and modifies Tables and Views employing SQL Data Definition Language (DDL) in MySQL environment.
- The graduate creates and modifies Primary Keys (PKs) and Foreign Keys (FKs) and Indexes with SQL Data Definition Language (DDL) in MySQL environment.
- The graduate populates Tables with insert, update, and delete using DML in the MySQL environment.
- The graduate creates simple Select-From-Where (SFW) and complex 3+ table join queries with Data Manipulation Language (DML) in MySQL environment.

#### **Data Management - Applications**

Proctored, computer-based objective assessment

#### **Data Management – Applications Project**

Performance assessment

### **Data Management for Programmers**

*This course introduces storage of various kinds and formats of data. Students will use standard SQL to demonstrate query capabilities provided by database management systems. The course will further cover data-related topics: data presentation, security (access and encryption), transaction management, and administration (backup, disaster recovery, and performance tuning). This course will address advanced topics such as data warehousing, data mining and distributed databases. It covers the following competencies:*

- *The graduate designs a conceptual and logical model for storing various formats and types of data in a database management system (DBMS).*
- *The graduate applies SQL Data Definition Language (DDL) to create, modify, and drop databases, tables, views, and indexes; employs SQL Data Manipulation Language (DML) to select, insert, update, and delete data in tables in a database management system (DBMS) environment; and programs in SQL Programming Language (PL/SQL) to run persistent applications such as stored procedures, functions, and triggers.*
- *The graduate logically and physically distributes data through the design of data warehouses, data marts, and distributed databases.*
- *The graduate applies tools and technologies such as XML, warehouses, and data mining to extract and present data.*
- *The graduate secures data by designing and implementing access controls and encryption.*



- The graduate manages data transactions through ACID (atomicity, consistency, isolation, durability) properties and concurrency control: serialization, locking methods, deadlock prevention, timestamping, and optimistic techniques.
- The graduate administers data by performing backups, disaster recovery planning, and SQL performance tuning and query optimization.

### **Data Management for Programmers**

Proctored, computer-based objective assessment

## **Network and Security**

### **Network and Security – Foundations**

*This course introduces students to the components of a computer network and the concept and role of communication protocols. The course will cover widely used categorical classifications of networks (i.e CAN, LAN, MAN, WAN) as well as network topologies, physical devices, and layered abstraction. The course will also introduce students to basic concepts of security, covering vulnerabilities of networks and mitigation techniques, security of physical media, and security policies and procedures. This course covers the following competencies:*

- The graduate identifies the basic concepts essential to networking.
- The graduate identifies the functional and technical components of network systems.
- The graduate identifies the basic concepts essential to network security.

### **Network and Security - Foundations**

Proctored, computer-based objective assessment

### **Network and Security – Applications**

*This course introduces the student to network security concepts including encryption, access control, and authentication. The course covers basic concepts of security, a survey of hardware and software used for securing information within a network, and best practices for protecting information and assets. It covers the following competencies:*

- The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.
- The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.
- The graduate identifies security needs and recommends appropriate security practices for network infrastructures.
- The graduate identifies and explains the role of encryption in network security.
- The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.
- The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.



## Networks

### Networks

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### Networks

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

**Network+ Exam N10-005** provided by uCertify includes a comprehensive Prepkit that contains questions and answers, study notes, interactive quizzes, flash cards and study tips.

## Scripting and Programming

### Scripting and Programming - Foundations

*This course provides an introduction to programming covering data structures, algorithms, and programming paradigms. The course presents the student with the concept of an object as well as the object-oriented paradigm and its importance. A survey of languages is covered and the distinction between interpreted and compiled languages is introduced. This course covers the following competencies:*

- *The graduate understands the basic concepts of computer programming, including data types, constants, variables, operator types, expressions, and functions.*

- *The graduate understands basic constructs of programming, including decisions and control structures.*
- *The graduate understands the object-oriented programming paradigm.*
- *The graduate understands the concept of algorithms, can analyze algorithm efficiency, and understands recursion.*
- *The graduate identifies steps of the design process, UML diagrams, and different programming languages and their applications.*

### **Scripting and Programming - Foundations**

Proctored, computer-based objective assessment

### **Scripting and Programming - Applications**

*This course provides an introduction to programming. It covers data structures, algorithms, and programming paradigms. It presents the concept of an object as well as the object-oriented paradigm and its importance. A survey of languages is covered and the distinction between interpreted and compiled languages is introduced. This course covers the following competencies:*

- *The graduate defines programming languages, identifies common algorithms, and identifies the parts of the Java Programming Environment.*
- *The graduate understands the object-oriented programming paradigm and identifies its elements.*
- *The graduate declares, initializes, and assigns values to a variable and differentiates between primitive and object data types.*
- *The graduate utilizes decision and loop constructs to control the flow of a program.*

### **Scripting and Programming - Applications**

Proctored, computer-based objective assessment

### **Scripting and Programming – Applications Project**

Performance assessment

## **Operating Systems**

### **Operating Systems for Programmers**

*This course covers operating systems from the perspective of a programmer including the placement of the operating system in the layered application development model. Primarily OSs provide Memory Management, Task Scheduling, and CPU allocation. Secondly, OSs provide tools for file storage/access, permission control, event handling, network access, and cross-process interaction. OSs also provide tools for debugging problems within a single process or within groups of programs. This course covers the following competencies:*

- *The graduate describes operating systems, their functions, and their structure.*
- *The graduate describes processes and threads and their relationship to multithreading and parallel programming.*

- *The graduate explains the different approaches to memory management and how they affect CPU utilization.*
- *The graduate describes different file systems and I/O algorithms.*
- *The graduate describes mechanisms used by the operating system for protection and security and how they relate to software applications.*

### **Operating Systems for Programmers**

Proctored, computer-based objective assessment

## **Business of IT**

### **Business of IT – Project Management**

*This course introduces the student to the project management & business analysis process within the context of an IT project. Fundamental concepts of project management will be covered including all phase of project management during a system life cycle including business analysis, requirements capturing, issue tracking, and release planning. Additional topics to include: development environments (dev, integration, QA, production), help desk and support, IT planning for business continuity. This course prepares a student for the CompTIA Project+ certification exam. This course covers the following competencies:*

- *The graduate describes and explains key components of project plans.*
- *The graduate creates a project plan.*
- *The graduate implements, controls, and coordinates projects according to project plans.*
- *The graduate explains the strategies and processes of project closure, acceptance, and delivery.*

### **Business of IT – Project Management**

Computer-based CompTIA Project+ 2009 exam

### **Business of IT – Applications**

*This course introduces IT students to information systems (IS). The course includes important topics related to management of information systems (MIS), such as system development, and business continuity. The course also provides an overview of management tools and issue tracking systems. It covers the following competencies:*

- *The graduate defines the general principles of information systems (IS) and the role of IS in the business process within an organization.*
- *The graduate defines the different methods of system development and selects the appropriate method for a project.*
- *The graduate identifies the role of management in information systems and the necessity for security and contingency plans.*
- *The graduate recognizes the need for support center tool, and identifies ways to manage the support processes.*

## Business of IT – Applications

Proctored, computer-based objective assessment

# Software

## Software I

*This course focuses on skills and concepts students need to know, to understand, and to apply object-oriented concepts in the Java programming. It covers the following competencies:*

- *The graduate develops and uses classes, interfaces, and variables in code development.*
- *The graduate uses object-oriented concepts and programming techniques to develop applications that are flexible and maintainable.*
- *The graduate applies appropriate control structures to develop robust applications.*
- *The graduate uses appropriate Application Programming Interface (API) classes and interfaces to perform efficient string, pattern, and stream processing.*
- *The graduate applies concepts to understand and implement the concepts of inheritance*
- *The graduate applies concepts to implement and handle exceptions in the Java Programming Environment.*

## Software I

Proctored at an authorized Pearson Vue Testing Center, computer-based Oracle Certified Associate, Java SE 7 Programmer (1Z0-803)

## Software II

*This course focuses on skills and concepts students need to know, to understand, and write Perl scripts. It covers the following competencies:*

- *The graduate demonstrates the basics of dynamic programming.*
- *The graduate manipulates complex variables and regular expressions.*
- *The graduate writes code that uses flow control.*
- *The graduate uses object-oriented concepts to create flexible and maintainable programs.*

## Software II – Advanced Java Concepts

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based Oracle Certified Professional Java SE 7 Programmer exam

## Software Engineering

*This course introduces the concepts of software engineering to IT core graduates. It is a standalone course that is critical to the IT program. It emphasizes the need for a disciplined approach to software engineering by providing an overview of software and software engineering processes and why they are challenging. A generic process framework is covered to provide the groundwork for formal process models. Prescriptive process models (e.g., Waterfall Model) and Agile Development is included. An introduction to the elements/phases of software engineering is introduced which includes Requirements Engineering (including UML,*

Use Cases), Design Concepts, Software Quality and Software Testing, and Project Management. This course covers the following competencies:

- The graduate describes software and legacy software; the core principles of software engineering, the generic process framework, introductory software engineering concepts and terms (e.g. SDLC, prescriptive process model); and selects appropriate model activities when given project descriptions.
- The graduate describes software engineering process models (e.g., waterfall, agile methodologies) and selects appropriate models when given project descriptions.
- The graduate defines requirements engineering concepts, describes requirements engineering processes, and selects appropriate graphical models for specific projects.
- The graduate describes software design and design concepts and classes and identifies appropriate uses of design concepts for specific projects.
- The graduate describes quality assurance processes and explains how to implement quality and software testing concepts in specific cases.
- The graduate describes fundamental principles of project management and selects risk mitigation strategies for specific projects.

### **Software Engineering**

Proctored, computer-based objective assessment

## **Leadership and Management**

### **Organizational Behavior and Management**

This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.

### **Organizational Behavior and Leadership**

## Software Applications

### Client-Server Application Development

*This course introduces students to client/server application programming classes, structures, and concepts. The course covers networking and client/server, streams, threads, URLs, URIs, HTTP, and socket programming concepts. It covers the following competencies:*

- *The graduate explains basic concepts of networking, including the Internet.*
- *The graduate explains the nature of streams and writes java code to implement and manipulate threads and streams.*
- *The graduate develops client/server applications that implement the Internet classes in Java, including proxies.*
- *The graduate implements client and server sockets including secure sockets.*

### Client-Server Application Development

Proctored, computer-based objective assessment

### Mobile Application Development

*This course introduces students to programming for mobile devices using a Software Development Kit (SDK). Students with previous knowledge of programming will learn how to install and utilize a SDK, build a basic mobile application, build a mobile applications using a graphical user interface(GUI), adapt applications to different mobile devices, save data, execute and debug mobile applications using emulators, and deploy a mobile application. This course covers the following competencies:*

- *The graduate explains mobile development, develops a simple mobile application using the IDE, documents debugging the mobile application, and describes how to use an emulator.*
- *The graduate describes the Activity lifecycle in the mobile application, and creates and links an activity.*
- *The graduate creates a user interface and describes how to handle user input.*
- *The graduate explains ways to save data in a mobile application, and creates a data base in a mobile application.*
- *The graduate explains how to share information in mobile applications and creates a user-defined content provider.*
- *The graduate describes how to utilize the available hardware and services available in different devices.*
- *The graduate describes mobile application deployment and prepares and application for deployment.*

### Mobile Application Development



Proctored, computer-based objective assessment

### Mobile Application Development Project

Performance assessment

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone

### Software Development Capstone

*This course covers the following competency:*

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

### Software Development Capstone

Performance assessment

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email [studentservices@wgu.edu](mailto:studentservices@wgu.edu). We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and**



**Saturday and Sunday, 10 AM to 7 PM, MT.** To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [\*\*servicedesk@wgu.edu\*\*](mailto:servicedesk@wgu.edu). For the most current information regarding WGU support services, please visit the “Help” tab on the Student Portal at [\*\*http://my.wgu.edu\*\*](http://my.wgu.edu).



# Del Mar College Certificate, Digital Media Advanced

(Please find transferable credits on page 7.)

*Bachelor of Science in*  
**Software Development**

## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU’s Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## **Orientation**

The Orientation focuses on acquainting the student with WGU’s competency-based model, distance education, technology, and other resources and tools available for students. You will

also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will “clear” through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may “clear” some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student's WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12 units per term, for a student who has no transfer units would look similar to the one on the next page.

Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.



## STANDARD PATH FOR BACHELOR OF SCIENCE, SOFTWARE DEVELOPMENT

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	
TCP1	English Composition II	3	
C132	Elements & Applications of Effective Communication	3	
C278	College Algebra	4	
CJC1	Introduction to Probability and Statistics	3	
C164	Introduction to Physics	4	
IWC1	Literature, Arts and Humanities	2	
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	
CLC1	Reasoning and Problem Solving	3	
BNC1	Organizational Behavior and Leadership	3	
	Total Potential General Education Units:	33	
	Total Actual General Education Units Awarded to Student:		
Information Technology Core			
C182	Introduction to IT	4	
C393	IT Fundamentals II	4	
C394	IT Applications	4	
EUP1/EUC1	Web Development Fundamentals	3	ITSE 2302
C173	Scripting and Programming - Foundations	3	
C172	Network and Security - Foundations	3	
C175	Data Management - Foundations	3	
	Total Potential Information Technology Core Units:	24	
	Total Actual Information Technology Core Units Awarded to Student:	3	
	Total Potential Transfer Units of Gen-Ed and Core:	57	
Additional Transfers			
C169	Scripting and Programming - Applications	4	
C170	Data Management - Applications	4	

C178	Network and Security - Applications	4	
EDV1	Software I	6	
C195	Software II - Advanced Java Concepts	6	
C191	Operating Systems for Programmers	3	
CRV1	Networks	4	
C176	Business of IT - Project Management	4	
C179	Business of IT - Applications	4	
TYC1/TYP1	Object Oriented Design and Development	4	
<b>Non Transferable</b>			
C189	Data Structures	4	
C192	Data Management for Programmers	3	
C188	Software Engineering	4	
C193	Client-Server Application Development	3	
C196	Mobile Application Development	3	
SBT1	Technical Writing	3	
C199	Software Development Capstone	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	3	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	3	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: **IT Certifications** \*Note that all certifications, degrees or courses must have been completed within five years of start date or as determined valid by certifying vendor (if date is less than 5 years).

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.

## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

# *Areas of Study Within the Bachelor of Science in Software Development*

## IT Fundamentals

### **Introduction to IT**

*This course introduces students to 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:*

- *The graduate describes IT as a discipline and discusses the history and future of computing as well as the currently used infrastructure.*
- *The graduate describes information technology systems and their role in converting data to organizational knowledge.*
- *The graduate identifies the role of different types of software in a computing environment and explains the fundamentals of software development.*
- *The graduate recognizes and describes functions of basic computer hardware components.*
- *The graduate describes the structure, function, and security associated with networks.*
- *The graduate identifies common software architectures, development techniques, and the relationship between software and its environment.*
- *The candidate explains the structure and function of databases.*
- *The graduate explains the role of technology in today's business environment and describes basic concepts of project management.*
- *The graduate evaluates ethical concerns involved in the use of technology.*

### **Introduction to IT**

## **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

## **IT Foundations**

CompTIA A+ certification exam (220-801)

## **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.*
- *The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.*
- *The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.*

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- *The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.*
- *The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.*
- *The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.*
- *The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.*
- *The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.*
- *The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.*

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- *The graduate will describe and discuss the basic concepts of geography.*

- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

### **Geography**

Proctored, computer-based objective exam

## **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

## **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

## Elements of Effective Communication

*Elements of Effective Communication* introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:

- The graduate applies foundational elements of effective communication.
- The graduate applies appropriate communication strategies in interpersonal and group contexts.
- The graduate demonstrates effective presentational communication strategies in a given context.

### Elements of Effective Communication

Proctored, computer-based objective assessment

### Application of Effective Communication

Performance assessment that includes writing

## Introduction to Probability and Statistics

*This course covers the following competencies:*

- The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.
- The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.
- The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.
- The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.
- The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.
- The graduate determines the probability of events using simulations, diagrams, and probability rules.

### Introduction to Probability and Statistics

Proctored, computer-based objective assessment

## College Algebra

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*



- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### **College Algebra**

Proctored, computer-based objective assessment

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

### **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*

- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

#### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

#### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

#### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

#### **Web Development Fundamentals**

Proctored, computer-based objective assessment

### **Introduction to Object-Oriented Design and Development**

*The competencies covered in these courses are:*

- *The graduate applies object-oriented concepts, develops object-oriented designs, and uses object-oriented programming techniques.*

- *The graduate designs and develops object-oriented solutions that demonstrate appropriate use of inheritance and polymorphism.*
- *The graduate develops and interprets Unified Modeling Language diagrams that model object-oriented designs and develops and executes object-oriented software test cases.*
- *The graduate applies strategies to create programs that make use of collections and generics for manipulating data.*

### **Project in Introduction to Object-Oriented Design and Development**

This is a culminating activity that results in the student developing one or more Java applications with documentation.

### **Introduction to Object-Oriented Design and Development**

Proctored, computer-based objective assessment

## **Data Management**

### **Data Management - Foundations**

*This course introduces students to the concepts and terminology used in the field of data management. They 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 will be included. This course covers the following competencies:*

- *The graduate demonstrates an understanding of data, databases, and data management.*
- *The graduate demonstrates an understanding of the concepts of the relational model of data.*
- *The graduate demonstrates an understanding of SQL concepts.*
- *The graduate demonstrates an understanding of the concepts involved in the modeling of data.*
- *The graduate demonstrates appropriate strategies to normalize data.*
- *The graduate demonstrates an understanding of the concepts involved in business intelligence and analytical processing.*
- *The graduate demonstrates a fundamental understanding of storage technologies.*

### **Data Management - Foundations**

Proctored, computer-based objective assessment

### **Data Management - Applications**

*This course covers conceptual data modeling and provides an introduction to MySQL. Students will learn how to create simple to complex SELECT queries including subqueries and joins, and will also learn how to use SQL to update and delete data. Topics covered in this course include exposure to MySQL; developing physical schemas; creating and modifying databases, tables,*

views, foreign keys/primary keys (FKs/PKs), and indexes; populating tables; and developing simple Select-From-Where (SFW) queries to complex 3+ table join queries. This course covers the following competencies:

- The graduate creates conceptual data models and translates them into physical schemas.
- The graduate creates Databases utilizing SQL Data Definition Language (DDL) in MySQL environment.
- The graduate creates and modifies Tables and Views employing SQL Data Definition Language (DDL) in MySQL environment.
- The graduate creates and modifies Primary Keys (PKs) and Foreign Keys (FKs) and Indexes with SQL Data Definition Language (DDL) in MySQL environment.
- The graduate populates Tables with insert, update, and delete using DML in the MySQL environment.
- The graduate creates simple Select-From-Where (SFW) and complex 3+ table join queries with Data Manipulation Language (DML) in MySQL environment.

#### **Data Management - Applications**

Proctored, computer-based objective assessment

#### **Data Management – Applications Project**

Performance assessment

### **Data Management for Programmers**

*This course introduces storage of various kinds and formats of data. Students will use standard SQL to demonstrate query capabilities provided by database management systems. The course will further cover data-related topics: data presentation, security (access and encryption), transaction management, and administration (backup, disaster recovery, and performance tuning). This course will address advanced topics such as data warehousing, data mining and distributed databases. It covers the following competencies:*

- *The graduate designs a conceptual and logical model for storing various formats and types of data in a database management system (DBMS).*
- *The graduate applies SQL Data Definition Language (DDL) to create, modify, and drop databases, tables, views, and indexes; employs SQL Data Manipulation Language (DML) to select, insert, update, and delete data in tables in a database management system (DBMS) environment; and programs in SQL Programming Language (PL/SQL) to run persistent applications such as stored procedures, functions, and triggers.*
- *The graduate logically and physically distributes data through the design of data warehouses, data marts, and distributed databases.*
- *The graduate applies tools and technologies such as XML, warehouses, and data mining to extract and present data.*
- *The graduate secures data by designing and implementing access controls and encryption.*

- The graduate manages data transactions through ACID (atomicity, consistency, isolation, durability) properties and concurrency control: serialization, locking methods, deadlock prevention, timestamping, and optimistic techniques.
- The graduate administers data by performing backups, disaster recovery planning, and SQL performance tuning and query optimization.

### **Data Management for Programmers**

Proctored, computer-based objective assessment

## **Network and Security**

### **Network and Security – Foundations**

*This course introduces students to the components of a computer network and the concept and role of communication protocols. The course will cover widely used categorical classifications of networks (i.e CAN, LAN, MAN, WAN) as well as network topologies, physical devices, and layered abstraction. The course will also introduce students to basic concepts of security, covering vulnerabilities of networks and mitigation techniques, security of physical media, and security policies and procedures. This course covers the following competencies:*

- The graduate identifies the basic concepts essential to networking.
- The graduate identifies the functional and technical components of network systems.
- The graduate identifies the basic concepts essential to network security.

### **Network and Security - Foundations**

Proctored, computer-based objective assessment

### **Network and Security – Applications**

*This course introduces the student to network security concepts including encryption, access control, and authentication. The course covers basic concepts of security, a survey of hardware and software used for securing information within a network, and best practices for protecting information and assets. It covers the following competencies:*

- The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.
- The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.
- The graduate identifies security needs and recommends appropriate security practices for network infrastructures.
- The graduate identifies and explains the role of encryption in network security.
- The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.
- The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.

## Networks

### Networks

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### Networks

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

**Network+ Exam N10-005** provided by uCertify includes a comprehensive Prepkit that contains questions and answers, study notes, interactive quizzes, flash cards and study tips.

## Scripting and Programming

### Scripting and Programming - Foundations

*This course provides an introduction to programming covering data structures, algorithms, and programming paradigms. The course presents the student with the concept of an object as well as the object-oriented paradigm and its importance. A survey of languages is covered and the distinction between interpreted and compiled languages is introduced. This course covers the following competencies:*

- *The graduate understands the basic concepts of computer programming, including data types, constants, variables, operator types, expressions, and functions.*



- *The graduate understands basic constructs of programming, including decisions and control structures.*
- *The graduate understands the object-oriented programming paradigm.*
- *The graduate understands the concept of algorithms, can analyze algorithm efficiency, and understands recursion.*
- *The graduate identifies steps of the design process, UML diagrams, and different programming languages and their applications.*

### **Scripting and Programming - Foundations**

Proctored, computer-based objective assessment

### **Scripting and Programming - Applications**

*This course provides an introduction to programming. It covers data structures, algorithms, and programming paradigms. It presents the concept of an object as well as the object-oriented paradigm and its importance. A survey of languages is covered and the distinction between interpreted and compiled languages is introduced. This course covers the following competencies:*

- *The graduate defines programming languages, identifies common algorithms, and identifies the parts of the Java Programming Environment.*
- *The graduate understands the object-oriented programming paradigm and identifies its elements.*
- *The graduate declares, initializes, and assigns values to a variable and differentiates between primitive and object data types.*
- *The graduate utilizes decision and loop constructs to control the flow of a program.*

### **Scripting and Programming - Applications**

Proctored, computer-based objective assessment

### **Scripting and Programming – Applications Project**

Performance assessment

## **Operating Systems**

### **Operating Systems for Programmers**

*This course covers operating systems from the perspective of a programmer including the placement of the operating system in the layered application development model. Primarily OSs provide Memory Management, Task Scheduling, and CPU allocation. Secondly, OSs provide tools for file storage/access, permission control, event handling, network access, and cross-process interaction. OSs also provide tools for debugging problems within a single process or within groups of programs. This course covers the following competencies:*

- *The graduate describes operating systems, their functions, and their structure.*
- *The graduate describes processes and threads and their relationship to multithreading and parallel programming.*



- *The graduate explains the different approaches to memory management and how they affect CPU utilization.*
- *The graduate describes different file systems and I/O algorithms.*
- *The graduate describes mechanisms used by the operating system for protection and security and how they relate to software applications.*

### **Operating Systems for Programmers**

Proctored, computer-based objective assessment

## **Business of IT**

### **Business of IT – Project Management**

*This course introduces the student to the project management & business analysis process within the context of an IT project. Fundamental concepts of project management will be covered including all phase of project management during a system life cycle including business analysis, requirements capturing, issue tracking, and release planning. Additional topics to include: development environments (dev, integration, QA, production), help desk and support, IT planning for business continuity. This course prepares a student for the CompTIA Project+ certification exam. This course covers the following competencies:*

- *The graduate describes and explains key components of project plans.*
- *The graduate creates a project plan.*
- *The graduate implements, controls, and coordinates projects according to project plans.*
- *The graduate explains the strategies and processes of project closure, acceptance, and delivery.*

### **Business of IT – Project Management**

Computer-based CompTIA Project+ 2009 exam

### **Business of IT – Applications**

*This course introduces IT students to information systems (IS). The course includes important topics related to management of information systems (MIS), such as system development, and business continuity. The course also provides an overview of management tools and issue tracking systems. It covers the following competencies:*

- *The graduate defines the general principles of information systems (IS) and the role of IS in the business process within an organization.*
- *The graduate defines the different methods of system development and selects the appropriate method for a project.*
- *The graduate identifies the role of management in information systems and the necessity for security and contingency plans.*
- *The graduate recognizes the need for support center tool, and identifies ways to manage the support processes.*

## Business of IT – Applications

Proctored, computer-based objective assessment

# Software

## Software I

*This course focuses on skills and concepts students need to know, to understand, and to apply object-oriented concepts in the Java programming. It covers the following competencies:*

- *The graduate develops and uses classes, interfaces, and variables in code development.*
- *The graduate uses object-oriented concepts and programming techniques to develop applications that are flexible and maintainable.*
- *The graduate applies appropriate control structures to develop robust applications.*
- *The graduate uses appropriate Application Programming Interface (API) classes and interfaces to perform efficient string, pattern, and stream processing.*
- *The graduate applies concepts to understand and implement the concepts of inheritance*
- *The graduate applies concepts to implement and handle exceptions in the Java Programming Environment.*

## Software I

Proctored at an authorized Pearson Vue Testing Center, computer-based Oracle Certified Associate, Java SE 7 Programmer (1Z0-803)

## Software II

*This course focuses on skills and concepts students need to know, to understand, and write Perl scripts. It covers the following competencies:*

- *The graduate demonstrates the basics of dynamic programming.*
- *The graduate manipulates complex variables and regular expressions.*
- *The graduate writes code that uses flow control.*
- *The graduate uses object-oriented concepts to create flexible and maintainable programs.*

## Software II – Advanced Java Concepts

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based Oracle Certified Professional Java SE 7 Programmer exam

## Software Engineering

*This course introduces the concepts of software engineering to IT core graduates. It is a standalone course that is critical to the IT program. It emphasizes the need for a disciplined approach to software engineering by providing an overview of software and software engineering processes and why they are challenging. A generic process framework is covered to provide the groundwork for formal process models. Prescriptive process models (e.g., Waterfall Model) and Agile Development is included. An introduction to the elements/phases of software engineering is introduced which includes Requirements Engineering (including UML,*

Use Cases), Design Concepts, Software Quality and Software Testing, and Project Management. This course covers the following competencies:

- The graduate describes software and legacy software; the core principles of software engineering, the generic process framework, introductory software engineering concepts and terms (e.g. SDLC, prescriptive process model); and selects appropriate model activities when given project descriptions.
- The graduate describes software engineering process models (e.g., waterfall, agile methodologies) and selects appropriate models when given project descriptions.
- The graduate defines requirements engineering concepts, describes requirements engineering processes, and selects appropriate graphical models for specific projects.
- The graduate describes software design and design concepts and classes and identifies appropriate uses of design concepts for specific projects.
- The graduate describes quality assurance processes and explains how to implement quality and software testing concepts in specific cases.
- The graduate describes fundamental principles of project management and selects risk mitigation strategies for specific projects.

### **Software Engineering**

Proctored, computer-based objective assessment

## **Leadership and Management**

### **Organizational Behavior and Management**

This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.

### **Organizational Behavior and Leadership**

## Software Applications

### Client-Server Application Development

*This course introduces students to client/server application programming classes, structures, and concepts. The course covers networking and client/server, streams, threads, URLs, URIs, HTTP, and socket programming concepts. It covers the following competencies:*

- *The graduate explains basic concepts of networking, including the Internet.*
- *The graduate explains the nature of streams and writes java code to implement and manipulate threads and streams.*
- *The graduate develops client/server applications that implement the Internet classes in Java, including proxies.*
- *The graduate implements client and server sockets including secure sockets.*

### Client-Server Application Development

Proctored, computer-based objective assessment

### Mobile Application Development

*This course introduces students to programming for mobile devices using a Software Development Kit (SDK). Students with previous knowledge of programming will learn how to install and utilize a SDK, build a basic mobile application, build a mobile applications using a graphical user interface(GUI), adapt applications to different mobile devices, save data, execute and debug mobile applications using emulators, and deploy a mobile application. This course covers the following competencies:*

- *The graduate explains mobile development, develops a simple mobile application using the IDE, documents debugging the mobile application, and describes how to use an emulator.*
- *The graduate describes the Activity lifecycle in the mobile application, and creates and links an activity.*
- *The graduate creates a user interface and describes how to handle user input.*
- *The graduate explains ways to save data in a mobile application, and creates a data base in a mobile application.*
- *The graduate explains how to share information in mobile applications and creates a user-defined content provider.*
- *The graduate describes how to utilize the available hardware and services available in different devices.*
- *The graduate describes mobile application deployment and prepares and application for deployment.*

### Mobile Application Development

Proctored, computer-based objective assessment

### Mobile Application Development Project

Performance assessment

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone

### Software Development Capstone

*This course covers the following competency:*

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

### Software Development Capstone

Performance assessment

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email [studentservices@wgu.edu](mailto:studentservices@wgu.edu). We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and**

**Saturday and Sunday, 10 AM to 7 PM, MT.** To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [\*\*servicedesk@wgu.edu\*\*](mailto:servicedesk@wgu.edu). For the most current information regarding WGU support services, please visit the “Help” tab on the Student Portal at [\*\*http://my.wgu.edu\*\*](http://my.wgu.edu).



# Del Mar College Certificate, Digital Media Essentials

(Please find transferable credits on page 7.)

*Bachelor of Science in*  
**Software Development**



## Understanding the Competency-Based Approach

Practically speaking, what does it mean when we say that WGU programs are competency-based? Unlike traditional universities, WGU does not award degrees based on credit hours or on a certain set of required courses. Instead, students earn their degrees by demonstrating their skills, knowledge, and understanding of important concepts through a series of carefully designed assessments.

Progress through your degree program is governed, not by classes, but by satisfactory completion of the required assessments that demonstrate your mastery of the competencies. Of course, you will need to engage in learning experiences as you brush up on competencies or develop knowledge and skills in areas in which you may be weak. For this learning and development, WGU has a rich array of learning resources in which you may engage under the direction of your mentor. You will work closely with your mentor to schedule your program for completing the assessments. (We discuss assessments in much more detail later in this guide.) You will work closely with additional faculty members as you proceed through courses of study that are designed to lead you through the content you must master in order to pass individual assessments.

The benefit of this competency-based system is that it makes it possible for people who are knowledgeable about a particular subject to make accelerated progress toward completing a WGU degree even if they lack college experience. You may have gained your skills and knowledge of a subject on the job, accumulated wisdom through years of life experience, or, indeed, took a course on a particular subject. WGU awards a degree to you based on the skills and knowledge that you possess and can demonstrate, not the number of credits you have 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). The WGU Teachers College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The nursing programs are accredited by the Commission on Collegiate Nursing Education (CCNE). The Health Informatics program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

## The Degree Plan

The focus of your program is your personalized Degree Plan. The Degree Plan is a detailed blueprint of the learning resources and assessments that comprise your program. The length of 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.

Students will vary widely in the specific skills and information they need to learn. For example, some may be highly knowledgeable in a subject matter and would not need to engage in new learning opportunities. Others may find that portions of the program require completely new learning and that they may need to take an online class or participate in a study module to acquire the knowledge and skills needed to pass the 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 have more time. For this reason, you will complete pre-assessments to help your mentor form a profile of your prior knowledge and experience for use in creating your Degree Plan.

## **WGU's Mentoring Approach**

Our mentoring approach is a powerful component of the WGU educational experience. When you enroll at WGU, you will begin interacting with your personal mentor, course mentors, and support staff. Your mentor takes an active role and a personal interest in your success. Whether by e-mail or phone, your mentor will be your “point person” of communication throughout your program. Your mentor will help motivate you to work hard to complete your program. When you have questions or concerns, your mentor team will help you resolve them.

You and your mentor will work together to evaluate your educational background, strengths, and weaknesses. With this analysis, your mentors will help determine in which areas you are already competent (and can move quickly to assessment) and areas you need to work on; this will become your personalized Degree Plan. Your mentor will direct you to the Courses of Study that contain the best learning resources for you (courses, texts, independent study modules, etc.) and are supported by course mentors that serve as your content experts for each area of study. As you proceed through your academic program, you and your mentor will determine when you are ready for the required assessments. If you are ready, your assessment will be scheduled. You will follow this same process as you proceed through each domain.

## **Connecting with Other Mentors and Fellow Students**

As you proceed through your Degree Plan, you may also have direct contact with other faculty members. These communications can take a variety of forms, including participation in learning communities, office hours via the courses of study, and webinars. As a WGU student, you will have access to your own personal MyWGU Student Portal that will provide a gateway to courses of study, learning communities, and program communities where you will have interactions with faculty and other students. Courses of study and communities are specifically designed to support you as you develop competencies in preparation for your assessments through the utilization of threaded discussions, blogs, and chats that are guided by content experts. You will access your program community during the Education Without Boundaries introductory 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 a Student Services Associate to help you and your mentor solve any special problems that may arise.

## Orientation

The Orientation focuses on acquainting the student with WGU's competency-based model, distance education, technology, and other resources and tools available for students. You will also utilize tutorials, message boards, online chats, and other activities to connect with other students in your program. This orientation is completed before you 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 on demonstration of competency. However, if you have completed college coursework at another accredited institution, you may have your transcripts evaluated and may be able to have some lower-division or co-requisite assessments cleared. The guidelines for determining what will "clear" through transfer vary based on the degree program.

The following guidelines generally apply: Upper-division degree requirements cannot be cleared through prior college credit. However, students who have already demonstrated competence by passing certain industry certification exams within the past five years may "clear" some of the upper-division assessments. The certifications that will clear WGU requirements vary by program. WGU does not clear any requirements based on a student's professional experience and does not perform a "resume review" or "portfolio review" that will automatically clear 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. Your terms are six months long. Longer terms and continuous enrollment allow you to focus on your studies without the hassle of unnatural breaks between the shorter terms that you would experience in a more traditional environment. At the end of every six-month term, you and your 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 eight (8) competency units each term, and undergraduate students must enroll in at least twelve (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 assessments you are able to pass, not on your accumulation of credit hours or course grades. Every time you pass an assessment, you are demonstrating that you have mastered skills and knowledge in your degree program. For

comparison to traditional grading systems, passing an assessment means you have demonstrated competency equivalent to a “B” grade or better.

WGU has assigned competency units to each assessment so that we can track your progress through the program. A competency unit is equivalent to one semester credit of learning. Some assessments may be assigned three competency units while other assessments may be as large as 12 competency units.

Satisfactory Academic Progress (SAP) is particularly important for financial aid students because you must make 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. As full-time students, WGU graduate students must enroll in at least eight competency units each term, and undergraduate students must enroll in at least 12 competency units 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 assessments you add to your term to accelerate your progress. Additionally, during your first term at WGU you must pass at least three 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.

## Assessments

Your Degree Plan will include the assessments needed to complete your program. To obtain your degree you will be required to demonstrate your skills and knowledge by completing the following assessments:

**Performance Assessments** contain, in most cases, multiple scored tasks such as projects, essays, and research papers. Performance assessments contain detailed instructions and rubrics for completing each task and are submitted in TaskStream, an online project management and grading tool.

**Objective Assessments** are designed to evaluate your knowledge and skills in a domain of knowledge. Most 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.

**Certification Assessments** are used to determine competency in specific IT skills. Your program will include certifications from Microsoft, CompTIA, Sun Microsystems, and CIW. These exams may include performance items, simulations, and/or objective exam questions. Each certifying organization sets the passing score that WGU follows to award you credit for earned competencies. More details on individual certification exams will be provided later in this document

**Capstone Project:** The Capstone Project is the culmination of the student’s WGU degree program. It requires the student to demonstrate the integration and synthesis of competencies in all domains required for the degree, particularly in the area of emphasis.

As previously mentioned, we have assigned competency units (CUs) to each assessment in order to measure your academic progress. As an undergraduate student, you will be expected to enroll in a minimum of 12 competency units each term. A standard plan for the program, at 12

units per term, for a student who has no transfer units would look similar to the one on the next page.

Your personal progress can be faster, but your pace will be determined by the extent of your transfer units, your time commitment, and your determination to proceed at a faster rate.

## STANDARD PATH FOR BACHELOR OF SCIENCE, SOFTWARE DEVELOPMENT

Course Code	General Education	CU	Course Transfer Units
TBP1	English Composition I	3	
TCP1	English Composition II	3	
C132	Elements & Applications of Effective Communication	3	
C278	College Algebra	4	
CJC1	Introduction to Probability and Statistics	3	
C164	Introduction to Physics	4	
IWC1	Literature, Arts and Humanities	2	
IWT1	Literature, Arts and Humanities: Analysis & Interpretation	2	
BVC1	Geography	3	
CLC1	Reasoning and Problem Solving	3	
BNC1	Organizational Behavior and Leadership	3	
	Total Potential General Education Units:	33	
	Total Actual General Education Units Awarded to Student:		
Information Technology Core			
C182	Introduction to IT	4	
C393	IT Fundamentals II	4	ITSC 1301
C394	IT Applications	4	ITSC 1305
EUP1/EUC1	Web Development Fundamentals	3	ITSE 2313
C173	Scripting and Programming - Foundations	3	
C172	Network and Security - Foundations	3	
C175	Data Management - Foundations	3	
	Total Potential Information Technology Core Units:	24	
	Total Actual Information Technology Core Units Awarded to Student:	11	
	Total Potential Transfer Units of Gen-Ed and Core:	57	
Additional Transfers			
C169	Scripting and Programming - Applications	4	
C170	Data Management - Applications	4	

C178	Network and Security - Applications	4	
EDV1	Software I	6	
C195	Software II - Advanced Java Concepts	6	
C191	Operating Systems for Programmers	3	
CRV1	Networks	4	
C176	Business of IT - Project Management	4	
C179	Business of IT - Applications	4	
TYC1/TYP1	Object Oriented Design and Development	4	
<b>Non Transferable</b>			
C189	Data Structures	4	
C192	Data Management for Programmers	3	
C188	Software Engineering	4	
C193	Client-Server Application Development	3	
C196	Mobile Application Development	3	
SBT1	Technical Writing	3	
C199	Software Development Capstone	4	
	Total Actual Transfer Units of Gen-Ed and Core Awarded to Student:	11	
	Total Additional Transfer Units Awarded to Student:		
	Grand Total of Transfer Units Awarded to Student:	11	

\*Student must select this course in order to receive transfer credit.

IT Certifications were not factored in for transfer, but can be transferred if applicable, passed and documented. Click on the link to view Transferable IT Certifications for WGU's Online IT Degree Programs: **IT Certifications** \*Note that all certifications, degrees or courses must have been completed within five years of start date or as determined valid by certifying vendor (if date is less than 5 years).

The standard path shown above lists the courses of study (assessments) and the associated competency units by term. The Degree Plan will include greater detail about the courses of study, including the assessments and their associated standard learning resources.



## Learning Resources

You will work with your mentor to select the various learning resources needed to prepare for the required assessments. In most cases, the learning materials you will use are independent learning resources such as textbooks, e-learning modules, study guides, simulations, virtual labs, and tutorials. WGU works with dozens of educational providers, including enterprises, publishers, training companies, and higher educational institutions to give you high quality and effective instruction that matches the competencies that you are developing. The cost of many learning resources is included in your tuition, and you can enroll directly in those through your Degree Plan as your mentor has scheduled them. Some resources (e.g., many textbooks) are not covered by your tuition, and you will need to cover those costs separately. WGU has excellent bookstore and library arrangements to help you obtain the needed learning resources.

# *Areas of Study Within the Bachelor of Science in Software Development*

## IT Fundamentals

### **Introduction to IT**

*This course introduces students to 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:*

- *The graduate describes IT as a discipline and discusses the history and future of computing as well as the currently used infrastructure.*
- *The graduate describes information technology systems and their role in converting data to organizational knowledge.*
- *The graduate identifies the role of different types of software in a computing environment and explains the fundamentals of software development.*
- *The graduate recognizes and describes functions of basic computer hardware components.*
- *The graduate describes the structure, function, and security associated with networks.*
- *The graduate identifies common software architectures, development techniques, and the relationship between software and its environment.*
- *The candidate explains the structure and function of databases.*
- *The graduate explains the role of technology in today's business environment and describes basic concepts of project management.*
- *The graduate evaluates ethical concerns involved in the use of technology.*

### **Introduction to IT**

## **IT Foundations**

*IT Foundations helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- *The graduate demonstrates an understanding of personal computer components, and their function, in a desktop system.*
- *The graduate demonstrates a basic working knowledge of computer data storage and information retrieval.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops and portable devices.*
- *The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, and upgrading basic network types.*
- *The graduate recommends appropriate tools and strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environment.*
- *The graduate communicates effectively with colleagues and clients in a technological environment.*
- *The graduate evaluates the implication of job-related professional behavior in a given scenario.*

## **IT Foundations**

CompTIA A+ certification exam (220-801)

## **IT Applications**

*IT Applications helps students gain an understanding the personal computer components, and their function, in a desktop system as well as computer data storage and retrieval; classifying, installing, configuring, optimizing, upgrading, and troubleshooting printers, laptops, portable devices, operating systems, networks, and system security; recommending appropriate tools, diagnostic procedures, preventative maintenance and troubleshooting techniques for personal computer components in a desktop system; strategies for identifying, preventing, and reporting safety hazards and environmental/human accidents in a technological environments; and effective communication with colleagues and clients as well as job-related professional behavior. This course covers the following competencies:*

- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting computer operating systems.
- The graduate recommends appropriate strategies for classifying, controlling access, setting permission, configuring, optimizing, and upgrading basic system security.
- The graduate recommends appropriate tools, diagnostic procedures, preventive maintenance, and troubleshooting techniques for personal computer components in a desktop system.
- The graduate recommends appropriate strategies for classifying, installing, configuring, optimizing, upgrading, and troubleshooting laptops, tablets, and mobile devices.

### **IT Applications**

CompTIA A+ certification exam (220-802)

## **General Education**

### **Collegiate Level Reasoning and Problem Solving**

*This course includes topics in problem identification and clarification, planning and information gathering, identifying assumptions and values, analysis and interpretation of information and data, reaching well-founded conclusions, and identifying the role of critical thinking in the disciplines and professions. It covers the following competencies:*

- The graduate analyzes open-ended problems by learning about the problem and evaluating the accuracy and relevance of different perspectives on the problem.
- The graduate evaluates different sources representing a range of perspectives on a problem in order to weigh the implications and consequences of different solutions to the problem.
- The graduate identifies internal and external biases and assumptions related to a problem, and evaluates the influence and validity of these biases and assumptions.
- The graduate synthesizes information to understand a problem's complexities and potential solutions, and then evaluates the reasoning and evidence in support of these different solutions.
- The graduate logically brings together information to arrive at a viable solution to a problem, and then clearly and accurately communicates the results.
- The graduate recognizes the value of critical thinking in identifying and understanding the underlying structures of the disciplines and professions.

### **Reasoning and Problem Solving**

Proctored, computer-based objective exam

### **Geography**

*This course focuses on fundamentals of geography, places and regions, physical and human systems, and the environment. It covers the following competencies:*

- The graduate will describe and discuss the basic concepts of geography.

- *The graduate can describe and discuss places and regions.*
- *The graduate will describe and discuss physical systems.*
- *The graduate will describe and discuss human systems.*
- *The graduate will describe and discuss the environment.*

### **Geography**

Proctored, computer-based objective exam

## **English Composition I**

*This course introduces learners to the types of writing and thinking that is valued in college and beyond. Students will practice writing in several genres and several media, with emphasis placed on writing and revising academic arguments. It covers the following competencies:*

- *The graduate applies appropriate grammatical rules, sentence structure, and writing conventions.*
- *The graduate selects appropriate rhetorical strategies that improve writing and argumentation.*
- *The graduate appropriately uses a given writing style.*
- *The graduate uses appropriate writing and revision strategies*
- *The graduate integrates credible and relevant sources into written arguments.*
- *The graduate composes an appropriate narrative for a given context.*
- *The graduate composes an appropriate argumentative essay for a given context.*

### **English Composition I**

Performance assessment that includes writing

## **English Composition II**

*English Composition II introduces learners to research writing and thinking that are valued in college and beyond. The Composition II course at WGU should be seen as a foundational course designed to help undergraduate students build fundamental skills for ongoing development in writing and research. Students will complete an academic research paper. This course covers the following competencies:*

- *The graduate evaluates the quality, credibility, and relevance of evidence in order to integrate evidence into a final research paper.*
- *The graduate applies steps of the writing process appropriately to improve quality of writing.*
- *The graduate composes an argumentative research paper.*

### **English Composition II**

Performance assessment that includes writing

## Elements of Effective Communication

*Elements of Effective Communication* introduces learners to elements of communication that are valued in college and beyond. Materials are based on five principles: being aware of your communication with yourself and others; using and interpreting verbal messages effectively; using and interpreting nonverbal messages effectively; listening and responding thoughtfully to others, and adapting messages to others appropriately. This course covers the following competencies:

- The graduate applies foundational elements of effective communication.
- The graduate applies appropriate communication strategies in interpersonal and group contexts.
- The graduate demonstrates effective presentational communication strategies in a given context.

### Elements of Effective Communication

Proctored, computer-based objective assessment

### Application of Effective Communication

Performance assessment that includes writing

## Introduction to Probability and Statistics

*This course covers the following competencies:*

- The graduate evaluates categorical and quantitative data using appropriate numerical measures and graphical displays.
- The graduate evaluates the relationship between two variables through the creation and interpretation of numerical summaries and visual displays.
- The graduate evaluates the sampling methods used in studies including the effect they have on conclusions that can be made.
- The graduate designs and conducts observational studies, controlled experiments, and surveys to explore population characteristics.
- The graduate applies theoretical or empirical probability to a situation to quantify uncertainty.
- The graduate determines the probability of events using simulations, diagrams, and probability rules.

### Introduction to Probability and Statistics

Proctored, computer-based objective assessment

## College Algebra

*Understanding algebraic functions and their graphs as well as methods for solving equations and inequalities allows you to model real-world phenomena and solve problems. Engaging in this course will help you build these skills, as well as build a strong foundation in algebra for further mathematics courses you may complete for your degree program. Additionally, this course aims to help you build your problem-solving and critical-thinking skills, which can be used in any course, job, or situation. It covers the following competencies:*

- *The graduate uses properties of numbers to analyze and evaluate numeric and algebraic expressions.*
- *The graduate solves equations and inequalities and applies them to model data and solve problems.*
- *The graduate analyzes and interprets functions using multiple representations.*
- *The graduate solves polynomial and rational functions and applies them to model data and solve problems.*
- *The graduate solves exponential and logarithmic functions and applies them to model data and solve problems.*
- *The graduate analyzes and solves systems of linear equations.*

### **College Algebra**

Proctored, computer-based objective assessment

### **Introduction to Physics**

*This course provides students with a comprehensive overview of the basic principles and unifying concepts of physics. You will integrate conceptual knowledge with practical and laboratory skills.*

- *The student will be able to analyze the nature and process of science.*
- *The graduate analyzes classical physics concepts to understand the world around them.*
- *The graduate applies electricity and magnetism concepts to understand the world around them.*
- *The graduate applies wave physics concepts to understand the world around them.*
- *The graduate analyzes principles of thermodynamics.*
- *The graduate analyzes modern physics concepts.*

### **Introduction to Physics**

Proctored, computer-based objective exam

### **Introduction to Physics Lab**

Performance assessment

### **Literature, Arts, and the Humanities**

*These courses focus on content, concepts, terminology, methodology, models, and issues within and across the disciplines of the humanities. They cover the following competencies:*

- *The graduate recognizes various creative, philosophical, and linguistic artifacts and events in the humanities and applies approaches and methods of the humanities to address them.*
- *The graduate examines concepts and modes of expression in human imagination, values, and emotions.*



- *The graduate recognizes and analyzes relationships within the disciplines of the humanities; and how themes and concepts connect across individual disciplines of the humanities.*
- *The graduate recognizes and analyzes the interaction and integration of the humanities with cultures, and how specified cultural attitudes change over time.*
- *The graduate examines the characteristics, historical origins, and roles of ethics and belief systems in human cultures, and applies this knowledge to explain human behavior.*
- *The graduate recognizes and defines concepts from the visual and performing arts, identifies and defines media and processes, and applies these concepts and knowledge in evaluating works of art.*

#### **Literature, Arts, and the Humanities**

Proctored, computer-based objective exam

#### **Literature, Arts, and the Humanities: Analysis and Interpretation**

Performance assessment that includes subjective and objective analysis and interpretation in the humanities

## **Web Development**

### **Web Development Fundamentals**

*These courses introduce the fundamentals of web development, which will enable the student to design, develop, and deploy a website. Students will create web content using HTML 5 and gain the knowledge to style and create layouts using Cascading Style Sheets (CSS). Students will also learn how to host and upload a website to a free web server. These courses cover the following competencies:*

- *The graduate applies principals of HTML using block elements, inline level elements, lists, tables and various other elements for creating a web page.*
- *The graduate applies concepts of Cascading Style Sheets (CSS) to a website and controls the style, design, and layout of a website.*
- *The graduate applies principles required to use an FTP client and web host to upload files for a website to a web server.*

#### **Project in Web Development Fundamentals**

Performance assessment that includes demonstration of web development programming technologies and techniques.

#### **Web Development Fundamentals**

Proctored, computer-based objective assessment

### **Introduction to Object-Oriented Design and Development**

*The competencies covered in these courses are:*

- *The graduate applies object-oriented concepts, develops object-oriented designs, and uses object-oriented programming techniques.*



- *The graduate designs and develops object-oriented solutions that demonstrate appropriate use of inheritance and polymorphism.*
- *The graduate develops and interprets Unified Modeling Language diagrams that model object-oriented designs and develops and executes object-oriented software test cases.*
- *The graduate applies strategies to create programs that make use of collections and generics for manipulating data.*

### **Project in Introduction to Object-Oriented Design and Development**

This is a culminating activity that results in the student developing one or more Java applications with documentation.

### **Introduction to Object-Oriented Design and Development**

Proctored, computer-based objective assessment

## **Data Management**

### **Data Management - Foundations**

*This course introduces students to the concepts and terminology used in the field of data management. They 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 will be included. This course covers the following competencies:*

- *The graduate demonstrates an understanding of data, databases, and data management.*
- *The graduate demonstrates an understanding of the concepts of the relational model of data.*
- *The graduate demonstrates an understanding of SQL concepts.*
- *The graduate demonstrates an understanding of the concepts involved in the modeling of data.*
- *The graduate demonstrates appropriate strategies to normalize data.*
- *The graduate demonstrates an understanding of the concepts involved in business intelligence and analytical processing.*
- *The graduate demonstrates a fundamental understanding of storage technologies.*

### **Data Management - Foundations**

Proctored, computer-based objective assessment

### **Data Management - Applications**

*This course covers conceptual data modeling and provides an introduction to MySQL. Students will learn how to create simple to complex SELECT queries including subqueries and joins, and will also learn how to use SQL to update and delete data. Topics covered in this course include exposure to MySQL; developing physical schemas; creating and modifying databases, tables,*

views, foreign keys/primary keys (FKs/PKs), and indexes; populating tables; and developing simple Select-From-Where (SFW) queries to complex 3+ table join queries. This course covers the following competencies:

- The graduate creates conceptual data models and translates them into physical schemas.
- The graduate creates Databases utilizing SQL Data Definition Language (DDL) in MySQL environment.
- The graduate creates and modifies Tables and Views employing SQL Data Definition Language (DDL) in MySQL environment.
- The graduate creates and modifies Primary Keys (PKs) and Foreign Keys (FKs) and Indexes with SQL Data Definition Language (DDL) in MySQL environment.
- The graduate populates Tables with insert, update, and delete using DML in the MySQL environment.
- The graduate creates simple Select-From-Where (SFW) and complex 3+ table join queries with Data Manipulation Language (DML) in MySQL environment.

#### **Data Management - Applications**

Proctored, computer-based objective assessment

#### **Data Management – Applications Project**

Performance assessment

### **Data Management for Programmers**

This course introduces storage of various kinds and formats of data. Students will use standard SQL to demonstrate query capabilities provided by database management systems. The course will further cover data-related topics: data presentation, security (access and encryption), transaction management, and administration (backup, disaster recovery, and performance tuning). This course will address advanced topics such as data warehousing, data mining and distributed databases. It covers the following competencies:

- The graduate designs a conceptual and logical model for storing various formats and types of data in a database management system (DBMS).
- The graduate applies SQL Data Definition Language (DDL) to create, modify, and drop databases, tables, views, and indexes; employs SQL Data Manipulation Language (DML) to select, insert, update, and delete data in tables in a database management system (DBMS) environment; and programs in SQL Programming Language (PL/SQL) to run persistent applications such as stored procedures, functions, and triggers.
- The graduate logically and physically distributes data through the design of data warehouses, data marts, and distributed databases.
- The graduate applies tools and technologies such as XML, warehouses, and data mining to extract and present data.
- The graduate secures data by designing and implementing access controls and encryption.

- The graduate manages data transactions through ACID (atomicity, consistency, isolation, durability) properties and concurrency control: serialization, locking methods, deadlock prevention, timestamping, and optimistic techniques.
- The graduate administers data by performing backups, disaster recovery planning, and SQL performance tuning and query optimization.

### **Data Management for Programmers**

Proctored, computer-based objective assessment

## **Network and Security**

### **Network and Security – Foundations**

*This course introduces students to the components of a computer network and the concept and role of communication protocols. The course will cover widely used categorical classifications of networks (i.e CAN, LAN, MAN, WAN) as well as network topologies, physical devices, and layered abstraction. The course will also introduce students to basic concepts of security, covering vulnerabilities of networks and mitigation techniques, security of physical media, and security policies and procedures. This course covers the following competencies:*

- The graduate identifies the basic concepts essential to networking.
- The graduate identifies the functional and technical components of network systems.
- The graduate identifies the basic concepts essential to network security.

### **Network and Security - Foundations**

Proctored, computer-based objective assessment

### **Network and Security – Applications**

*This course introduces the student to network security concepts including encryption, access control, and authentication. The course covers basic concepts of security, a survey of hardware and software used for securing information within a network, and best practices for protecting information and assets. It covers the following competencies:*

- The graduate identifies and discusses basic concepts of security and security threats, and recommends security procedures.
- The graduate recommends appropriate methods for controlling accessing data and information and for authenticating users and groups in gaining that access.
- The graduate identifies security needs and recommends appropriate security practices for network infrastructures.
- The graduate identifies and explains the role of encryption in network security.
- The graduate explains and makes recommendations for appropriate security strategies and procedures for organizational operations.
- The graduate evaluates risks associated with network security and recommends monitoring strategies and methods.

## Networks

### Networks

*This course focuses on network topologies including: protocols, ports, addressing schemes, routing, and wireless communication standards; physical and logical topologies, including wiring standards; differentiating, installing, and configuring network devices; troubleshooting network connectivity and performance issues as well as common security threats; and using hardware and software utilities to track and maintain network performance in optimized state. It covers the following competencies:*

- *The graduate distinguishes and explains network topologies, including protocols, ports, addressing schemes, routing, and wireless communication standards.*
- *The graduate differentiates and explains physical and logical topologies, including wiring standards.*
- *The graduate differentiates and installs/configures network devices.*
- *The graduate identifies appropriate methodologies for troubleshooting network connectivity and performance issues in a given network environment.*
- *The graduate uses hardware and software utilities to track and maintain network performance in optimized state.*
- *The graduate differentiates and explains network security devices and methods for troubleshooting common security threats.*

### Networks

Proctored at an authorized Pearson Vue Testing Center, computer-based CompTIA Network+ (N10-005) exam

**Network+ Exam N10-005** provided by uCertify includes a comprehensive Prepkit that contains questions and answers, study notes, interactive quizzes, flash cards and study tips.

## Scripting and Programming

### Scripting and Programming - Foundations

*This course provides an introduction to programming covering data structures, algorithms, and programming paradigms. The course presents the student with the concept of an object as well as the object-oriented paradigm and its importance. A survey of languages is covered and the distinction between interpreted and compiled languages is introduced. This course covers the following competencies:*

- *The graduate understands the basic concepts of computer programming, including data types, constants, variables, operator types, expressions, and functions.*

- *The graduate understands basic constructs of programming, including decisions and control structures.*
- *The graduate understands the object-oriented programming paradigm.*
- *The graduate understands the concept of algorithms, can analyze algorithm efficiency, and understands recursion.*
- *The graduate identifies steps of the design process, UML diagrams, and different programming languages and their applications.*

### **Scripting and Programming - Foundations**

Proctored, computer-based objective assessment

### **Scripting and Programming - Applications**

*This course provides an introduction to programming. It covers data structures, algorithms, and programming paradigms. It presents the concept of an object as well as the object-oriented paradigm and its importance. A survey of languages is covered and the distinction between interpreted and compiled languages is introduced. This course covers the following competencies:*

- *The graduate defines programming languages, identifies common algorithms, and identifies the parts of the Java Programming Environment.*
- *The graduate understands the object-oriented programming paradigm and identifies its elements.*
- *The graduate declares, initializes, and assigns values to a variable and differentiates between primitive and object data types.*
- *The graduate utilizes decision and loop constructs to control the flow of a program.*

### **Scripting and Programming - Applications**

Proctored, computer-based objective assessment

### **Scripting and Programming – Applications Project**

Performance assessment

## **Operating Systems**

### **Operating Systems for Programmers**

*This course covers operating systems from the perspective of a programmer including the placement of the operating system in the layered application development model. Primarily OSs provide Memory Management, Task Scheduling, and CPU allocation. Secondly, OSs provide tools for file storage/access, permission control, event handling, network access, and cross-process interaction. OSs also provide tools for debugging problems within a single process or within groups of programs. This course covers the following competencies:*

- *The graduate describes operating systems, their functions, and their structure.*
- *The graduate describes processes and threads and their relationship to multithreading and parallel programming.*

- *The graduate explains the different approaches to memory management and how they affect CPU utilization.*
- *The graduate describes different file systems and I/O algorithms.*
- *The graduate describes mechanisms used by the operating system for protection and security and how they relate to software applications.*

### **Operating Systems for Programmers**

Proctored, computer-based objective assessment

## **Business of IT**

### **Business of IT – Project Management**

*This course introduces the student to the project management & business analysis process within the context of an IT project. Fundamental concepts of project management will be covered including all phase of project management during a system life cycle including business analysis, requirements capturing, issue tracking, and release planning. Additional topics to include: development environments (dev, integration, QA, production), help desk and support, IT planning for business continuity. This course prepares a student for the CompTIA Project+ certification exam. This course covers the following competencies:*

- *The graduate describes and explains key components of project plans.*
- *The graduate creates a project plan.*
- *The graduate implements, controls, and coordinates projects according to project plans.*
- *The graduate explains the strategies and processes of project closure, acceptance, and delivery.*

### **Business of IT – Project Management**

Computer-based CompTIA Project+ 2009 exam

### **Business of IT – Applications**

*This course introduces IT students to information systems (IS). The course includes important topics related to management of information systems (MIS), such as system development, and business continuity. The course also provides an overview of management tools and issue tracking systems. It covers the following competencies:*

- *The graduate defines the general principles of information systems (IS) and the role of IS in the business process within an organization.*
- *The graduate defines the different methods of system development and selects the appropriate method for a project.*
- *The graduate identifies the role of management in information systems and the necessity for security and contingency plans.*
- *The graduate recognizes the need for support center tool, and identifies ways to manage the support processes.*



## Business of IT – Applications

Proctored, computer-based objective assessment

# Software

## Software I

*This course focuses on skills and concepts students need to know, to understand, and to apply object-oriented concepts in the Java programming. It covers the following competencies:*

- *The graduate develops and uses classes, interfaces, and variables in code development.*
- *The graduate uses object-oriented concepts and programming techniques to develop applications that are flexible and maintainable.*
- *The graduate applies appropriate control structures to develop robust applications.*
- *The graduate uses appropriate Application Programming Interface (API) classes and interfaces to perform efficient string, pattern, and stream processing.*
- *The graduate applies concepts to understand and implement the concepts of inheritance*
- *The graduate applies concepts to implement and handle exceptions in the Java Programming Environment.*

## Software I

Proctored at an authorized Pearson Vue Testing Center, computer-based Oracle Certified Associate, Java SE 7 Programmer (1Z0-803)

## Software II

*This course focuses on skills and concepts students need to know, to understand, and write Perl scripts. It covers the following competencies:*

- *The graduate demonstrates the basics of dynamic programming.*
- *The graduate manipulates complex variables and regular expressions.*
- *The graduate writes code that uses flow control.*
- *The graduate uses object-oriented concepts to create flexible and maintainable programs.*

## Software II – Advanced Java Concepts

Proctored at an authorized Prometric or Pearson Vue Testing Center, computer-based Oracle Certified Professional Java SE 7 Programmer exam

## Software Engineering

*This course introduces the concepts of software engineering to IT core graduates. It is a standalone course that is critical to the IT program. It emphasizes the need for a disciplined approach to software engineering by providing an overview of software and software engineering processes and why they are challenging. A generic process framework is covered to provide the groundwork for formal process models. Prescriptive process models (e.g., Waterfall Model) and Agile Development is included. An introduction to the elements/phases of software engineering is introduced which includes Requirements Engineering (including UML,*



Use Cases), Design Concepts, Software Quality and Software Testing, and Project Management. This course covers the following competencies:

- The graduate describes software and legacy software; the core principles of software engineering, the generic process framework, introductory software engineering concepts and terms (e.g. SDLC, prescriptive process model); and selects appropriate model activities when given project descriptions.
- The graduate describes software engineering process models (e.g., waterfall, agile methodologies) and selects appropriate models when given project descriptions.
- The graduate defines requirements engineering concepts, describes requirements engineering processes, and selects appropriate graphical models for specific projects.
- The graduate describes software design and design concepts and classes and identifies appropriate uses of design concepts for specific projects.
- The graduate describes quality assurance processes and explains how to implement quality and software testing concepts in specific cases.
- The graduate describes fundamental principles of project management and selects risk mitigation strategies for specific projects.

### **Software Engineering**

Proctored, computer-based objective assessment

## **Leadership and Management**

### **Organizational Behavior and Management**

This course explores how to lead and manage effectively in diverse business environments. Students are asked to demonstrate the ability to apply organizational leadership theories and management strategies in a series of scenario-based problems. It 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.

### **Organizational Behavior and Leadership**

## Software Applications

### Client-Server Application Development

*This course introduces students to client/server application programming classes, structures, and concepts. The course covers networking and client/server, streams, threads, URLs, URIs, HTTP, and socket programming concepts. It covers the following competencies:*

- *The graduate explains basic concepts of networking, including the Internet.*
- *The graduate explains the nature of streams and writes java code to implement and manipulate threads and streams.*
- *The graduate develops client/server applications that implement the Internet classes in Java, including proxies.*
- *The graduate implements client and server sockets including secure sockets.*

### Client-Server Application Development

Proctored, computer-based objective assessment

### Mobile Application Development

*This course introduces students to programming for mobile devices using a Software Development Kit (SDK). Students with previous knowledge of programming will learn how to install and utilize a SDK, build a basic mobile application, build a mobile applications using a graphical user interface(GUI), adapt applications to different mobile devices, save data, execute and debug mobile applications using emulators, and deploy a mobile application. This course covers the following competencies:*

- *The graduate explains mobile development, develops a simple mobile application using the IDE, documents debugging the mobile application, and describes how to use an emulator.*
- *The graduate describes the Activity lifecycle in the mobile application, and creates and links an activity.*
- *The graduate creates a user interface and describes how to handle user input.*
- *The graduate explains ways to save data in a mobile application, and creates a data base in a mobile application.*
- *The graduate explains how to share information in mobile applications and creates a user-defined content provider.*
- *The graduate describes how to utilize the available hardware and services available in different devices.*
- *The graduate describes mobile application deployment and prepares and application for deployment.*

### Mobile Application Development

Proctored, computer-based objective assessment

### Mobile Application Development Project

Performance assessment

## Technical Writing

### Technical Writing

*The technical writing requirement draws from the evidence students have accumulated in improved proficiency in research and professional written communication; the ability to think about and write for different audiences; and improved style, grammar and syntax. The course covers this competency:*

- *The candidate prepares a project proposal according to the guidelines specified in the program guide.*

### Technical Writing

Performance assessment

## Capstone

### Software Development Capstone

*This course covers the following competency:*

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

### Software Development Capstone

Performance assessment

## Need More Information? WGU Student Services

WGU has a Student Services team dedicated exclusively to helping students achieve their academic goals. The Student Services Office is available during extended hours to assist students with general questions and administrative or accessibility issues. The Student Services team members help students resolve issues, listen to student issues and concerns, and make recommendations for improving policy and practice based on student feedback. The Student Services team provides a formal means by which students can express their views, and those views in turn inform the decisions we make.

Student Services team members also assist students with unresolved concerns to find equitable resolutions. To contact the Student Services team, please feel free to call **(866) 903-0110** or email [studentservices@wgu.edu](mailto:studentservices@wgu.edu). We are available **Monday through Friday, 6 AM to 12 AM and Saturday and Sunday, 10 AM to 7 PM, MT.**

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 AM to 12 AM and**

**Saturday and Sunday, 10 AM to 7 PM, MT.** To contact the IT Service Desk, please call 1-877-HELP-WGU (877-435-7948) and select option 2 or email [\*\*servicedesk@wgu.edu\*\*](mailto:servicedesk@wgu.edu). For the most current information regarding WGU support services, please visit the “Help” tab on the Student Portal at [\*\*http://my.wgu.edu\*\*](http://my.wgu.edu).