



This course supports the assessment for Introduction to IT. The course covers 9 competencies and represents 4 competency units.

Introduction

Overview

This course will introduce you to information technology. It will discuss the various roles and functions of a typical IT department within a business. You will be presented with various IT disciplines including, systems and services, network and security, scripting and programming, data management, and business of IT. You will also learn the different technologies within these various roles and functions and how they relate to each other and to a business.

Getting Started

Welcome to Introduction to Information Technology! Most students start this course with some prior IT background, so we recommend you begin by taking the preassessment. Use the coaching report and the guidance of a mentor to help you target the areas where you need to focus your studying most. Each topic will direct you to specific modules of the Acrobatiq learning resource. Within these modules, there will be text to read, videos to watch, and questions to help you practice retrieving and applying your knowledge. At the end of each module, you will find a quiz you can use to assess whether you really have mastered the material or if you need to go back and spend more time in that topic.

Watch the following Welcome video for an introduction to this course:

Competencies

This course provides guidance to help you demonstrate the following 9 competencies:

- **Competency 4011.1.1: Basics and History of Computing**
The graduate describes IT as a discipline and discusses the history and future of computing as well as the currently used infrastructure.
- **Competency 4011.1.2: Overview of Information Systems**
The graduate describes information technology systems and their role in converting data to organizational knowledge.
- **Competency 4011.1.3: Software**
The graduate identifies the role of different types of software in a computing environment and explains the fundamentals of software development.
- **Competency 4011.1.4: Systems and Services**
The graduate recognizes and describes functions of basic computer hardware components.
- **Competency 4011.1.5: Networks**
The graduate describes the structure, function, and security associated with networks.



- **Competency 4011.1.6: Scripting and Programming**
The graduate identifies common software architectures, development techniques, and the relationship between software and its environment.
- **Competency 4011.1.7: Management of Data**
The graduate explains the structure and function of databases.
- **Competency 4011.1.8: Business of IT**
The graduate explains the role of technology in today's business environment and describes basic concepts of project management.
- **Competency 4011.1.9: Ethics in Information Technology**
The graduate evaluates ethical concerns involved in the use of technology .

Preparing for Success

The information in this section is provided to detail the resources available for you to use as you complete this course.

Learning Resources

The learning resources listed in this section are required to complete the activities in this course. For many resources, WGU has provided automatic access through the course. However, you may need to manually enroll in or independently acquire other resources. Read the full instructions provided to ensure that you have access to all of your resources in a timely manner.

Automatically Enrolled Learning Resources

Acrobatiq

This test is not difficult, but it is terminology intensive so there is going to be some memorization involved. You will need to understand how to apply these terms in addition to memorization.

This course maps each subject to the corresponding module. If you are only completing certain areas of this course, as directed by your mentor based on your preassessment results, you should follow the activities in order as they are laid out in this course. However, if you are completing the whole course from scratch, you may want to follow the order of the activities laid out in the learning resource. The choice is yours! You will be linked at the activity level to the following Acrobatiq course:

- Introduction to IT

Each of the modules provides **3 key features** designed to support you as an independent learner. These include:

- **Explanatory content: This is the informational "meat" of every unit. It consists of short passages of text with information, images, explanations, and short videos.**



- **Learn By Doing activities:** Learn By Doing activities give you the chance to practice the concept that you are learning, including hints and feedback to guide you if you struggle.
- **Did I Get This? activities:** Did I Get This? activities are your chance to do a quick "self-check" and assess your own understanding of the material before completing a standard Quiz that will allow you to self-evaluate your mastery of each unit.
- **Module Quiz:** The module quizzes test your understanding of the material for each module.

Duplicated modules recommended within the course are intentional to better mesh with the Coaching Report that comes after you have taken your preassessment. You do not actually have to repeat a module unless you need or want to.

This course includes a unit which will help you prepare for the modules in this resource. Some of the principles you learn in this unit will help you through the rest of your time at WGU. This optional activity does not directly align to any of the course objectives, but it is highly recommended that you complete it before moving forward.

- [Unit 1: Learning Strategies](#)

Contact your course mentor if you have further questions regarding the use of Acrobatiq.

Complete the Preassessment

If you believe you have previous knowledge of some or all topics covered in this course, start by taking the preassessment before you begin and use its results to focus your studies.

- Complete the preassessment located in the Assessment tab.

Course mentors can help you develop a study plan based on your preassessment results.

Topics and Pacing

The pacing guide suggests a weekly structure to pace your completion of learning activities. It is provided as a suggestion and does not represent a mandatory schedule. Follow the pacing guide carefully to complete the course in the suggested time frame.

Week 1

- Preparing for Success
- Information Technology as a Discipline
- History and Future of Computing
- Computer Classification and Infrastructure
- The Role of Technology in Converting Data and Information into Organizational Knowledge
- Systems

Week 2



- The Network as a Framework of the Computer Ecosystem
- Operating Systems and Applications
- Software Licenses
- Organization of a Computer
- Components of Computer Hardware

Week 3

- Communication Hardware
- World Wide Web
- Network Security

Week 4

- Software Architecture
- Programming Languages
- Data Storage and Analysis

Week 5

- Database Infrastructure
- Data Management Tools, Techniques, and Standards
- The IT Department
- Project Management
- System Development Life Cycle

Week 6

- Business Continuity
- Ethics
- Final Steps

Note: This pacing guide does not replace the course. Please continue to refer to the course for a comprehensive list of the resources and activities.

Course Mentor Support

As you prepare to successfully demonstrate competency in this subject, remember that we are ready to help you reach your educational goals. As subject matter experts, we enjoy and take pride in helping you become a reflective learner, problem solver, and critical thinker. We are excited to hear from you and eager to work with you!

Course Mentor's Recipe for Success

Take the Preassessment



- Whether you are currently working in IT, or just starting this exciting career field, it is hard to live in the world we do and not gain some knowledge in information technology. Taking the Preassessment **FIRST**, prior to accessing the learning resources, can save you a significant amount of time by quantifying what you already know, and where you should concentrate your studies.

Use Your Coaching Report

- Once you complete the Preassessment you will receive a Coaching Report. The Coaching Report will pinpoint which modules within the Learning Resources you need to concentrate on.

Follow the Pacing Guide

- The Pacing Guide, located in this course, can be used to help you plot your course through the content. We recommend mastering a **minimum of 4 - 6 modules per week**.

If you have any content-related questions, please do not hesitate to email or make an appointment at:

- [Contact Course Mentor](#)

You are also welcome to participate in our live cohorts.

- [Cohort Calendar](#)

Introduction to IT

Businesses depend on information technology to remain efficient. In fact, organizations depend so much on information technology that IT departments are now divided into different teams or other departments by sub-disciplines. This course will introduce you to IT as a general discipline and provide you some insight into its different areas, including their functions, the skillset required from their professionals, and their relationship to other areas of IT.

Information Technology as a Discipline

Businesses depend on IT to remain efficient. This topic provides an introduction to IT as a discipline including the different sub disciplines and roles found in an IT department.

This topic addresses the following competency:

- **Competency 4011.1.1: Basics and History of Computing**
The graduate describes IT as a discipline and discusses the history and future of computing as well as the currently used infrastructure.



This topic highlights the following objectives:

- Define *information technology (IT)*.
- Identify major IT roles and functions.

Complete: Acrobatiq Modules 1 and 2

As you complete the listed material below pay attention to the following:

- IT is more than equipment. IT professionals are part of a company's Information Technology.
- There are multiple roles in an IT department which means not every IT professional is an expert at every area of IT.
- Data and information are not the same.

Complete the following in the Acrobatiq course including all "Learn by Doing" and "Did I Get This?" activities:

- [Module 1: Introduction to Information Technology](#)
- [Module 2: IT as a Discipline](#)

Complete the following:

- [IT as a Discipline Quiz](#)

Estimated time to complete activity: 135 minutes

History and Future of Computing

We live in a rapidly changing world. Once reserved for big companies, information technology is now part of virtually every business and household. This topic will present you with the history of computing until present times, including the role of computing in a globalized world.

This topic addresses the following competencies:

- **Competency 4011.1.1: Basics and History of Computing**
The graduate describes IT as a discipline and discusses the history and future of computing as well as the currently used infrastructure.

This topic highlights the following objectives:

- Identify features of computer hardware found within the four computer generations.
- Describe shifts in programming from low-level languages to high-level languages.
- Identify current and emerging information technologies and their applications.
- Recognize IT's role in globalization and globalization's role in IT.

Complete: Acrobatiq Modules 7 and 24



As you complete the listed material below pay attention to the following:

- Computer evolution is divided in different generations of computers.
- Software evolution is made possible by the evolution of hardware.
- Programming languages have also evolved.

Complete the following modules in the Acrobatiq course including all "Learn by Doing" and "Did I Get This?" activities:

- [Module 7: The History of the Computer](#)
- [Module 24: Current and Emerging Technologies](#)

Complete the following:

- [The History of the Computer Quiz](#)
- [Current and Emerging Technologies Quiz](#)

Estimated time to complete activity: 270 minutes

Computer Classification and Infrastructure

Computers come in several forms including smartphones that fit in a pocket, to mainframes which fill a room. Computers can be classified according to their size, intended use, peripherals, and capabilities. This section will introduce you to a variety of computer classifications.

This topic addresses the following competencies:

- **Competency 4011.1.1: Basics and History of Computing**
The graduate describes IT as a discipline and discusses the history and future of computing as well as the currently used infrastructure.

This topic highlights the following objectives:

- Identify the categories of computers according to their components and capabilities.
- Identify types of computer software.
- Identify computer peripherals.

Complete: Acrobatiq Modules 6 and 13

As you complete the listed material below pay attention to the following:

- There are different types of software. Make a list with all the types you can think of.
- The main difference between operating systems and application software is their placement in the layered model and therefore their interfaces. Applications interact directly with the user. Operating systems interface directly with the hardware.



- Think of your computing devices (desktop, laptop, smartphone) and reflect on the types of peripherals they have.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 6: Components of Computer Hardware](#)
- [Module 13: Types of Software](#)

Note: module 13 will come back in the "Operating Systems and Applications" topic of this course. If you plan to complete this course, you are encouraged to complete module 13 at that point.

Complete the following:

- [Components of Computer Hardware Quiz](#) _
- [Types of Software Quiz](#) (*If you chose to complete module 13*)

Estimated time to complete activity: 210 minutes

The Role of Technology in Converting Data and Information into Organizational Knowledge

Although these terms are often used interchangeably, data and information are not the same thing. In a way, information is processed data. One level up from information is organizational knowledge. This topic will cover one of the most important roles of technology in an organization: converting data and information to organizational knowledge.

This topic addresses the following competencies:

- **Competency 4011.1.2: Overview of Information Systems**
The graduate describes information technology systems and their role in converting data to organizational knowledge.

This topic highlights the following objectives:

- Define *information system*.
- Differentiate between information and data.
- Describe characteristics of valuable data.

Complete: Acrobatiq Module 3

As you complete the listed material below pay attention to the following:

- Information systems are an essential component of an organization.
- Information systems have many shapes, forms, and sizes.
- Not all data is valuable.



- IT professional skills play an important role in obtaining accurate information.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 3: Data and Information](#)

Complete the following:

- [Data and Information Quiz](#)

Estimated time to complete activity: 135 minutes

Systems

Systems are an interconnected and interdependent set of components that together form a whole. Computer systems often utilize a model that classifies those components in input, processing, output, and storage. This model is called IPOS. This topic will introduce you to computer systems.

This topic addresses the following competencies:

- **Competency 4011.1.2: Overview of Information Systems**
The graduate describes information technology systems and their role in converting data to organizational knowledge.

This topic highlights the following objectives:

- Define *system*.
- Differentiate between input, output, and storage.

Complete: Acrobatiq Module 4

As you complete the listed material below pay attention to the following:

- Pay attention to the different components of an IPOS system.
- Pay attention to the difference between software and hardware components.
- Reflect on how hardware, software, users, and networks relate in a computer system.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 4: Computer Systems](#)

Complete the following:

- [Computer Systems Quiz](#)



Estimated time to complete activity: 135 minutes

The Network as a Framework of the Computer Ecosystem

Computer networks allow multiple resources to interconnect. A typical network, even a small one, shares resources such as computers, printers, storage, and Internet gateways. The network provides a framework where all parts of an information system are live. In this topic you will explore the role of the network as a framework of the computer ecosystem.

This topic addresses the following competencies:

- **Competency 4011.1.2: Overview of Information Systems**
The graduate describes information technology systems and their role in converting data to organizational knowledge.

This topic highlights the following objectives:

- Explain the role of the network as a framework for the business ecosystem.
- Identify the function of various computer classes in business ecosystems.

Complete: Acrobatiq Module 8

As you complete the listed material below pay attention to the following:

- Make sure you start by watching the video on page 51.
- Pay attention to the different types of servers and how they interact with each other.
- Being a system of interrelated groups of components, reflect on how networks make modern computing systems possible.

Complete the following in the Acrobatiq course including all "Learn by Doing" and "Did I Get This?" activities:

- [Module 8: Introduction to Computer Networks](#)

Estimated time to complete activity: 60 minutes

Operating Systems and Applications

Computing systems are designed in layers with hardware being the bottom layer and the user being the top one. Software layers act as an interface between the two. Operating systems interface between applications and the hardware, and applications interact between the operating system and the user. This section will explore this relationship.

This topic addresses the following competencies:



- **Competency 4011.1.3: Software**

The graduate identifies the role of different types of software in a computing environment and explains the fundamentals of software development.

This topic highlights the following objectives:

- Define operating system.
- Discuss how operating systems relate to application software.
- List common operating systems.
- Classify different types of operating systems and networks. (i.e., server, workstation, mobile).
- Recognize characteristics of cloud-based, intranet, and local applications.

Complete: Acrobatiq Modules 12 and 13

As you complete the listed material below pay attention to the following:

- Operating systems are essential to operate hardware.
- Most application software is useless without a host operating system.
- Users interact with applications which in turn interact with the operating system.
- Hardware resources are managed by the operating system.

Complete the following in the Acrobatiq course including all "Learn by Doing" and "Did I Get This?" activities:

- [Module 12: Introduction to Computer Software](#)
- [Module 13: Types of Software](#)

Complete the following:

- [Types of Software Quiz](#)

Note: module 13 was referenced in the "Computer Classification and Infrastructure" topic of this course. If you have completed this quiz, you can skip it or use it as a review.

Estimated time to complete activity: 165 minutes

Software Licenses

Not only are types of software varied, but so are the types of licensing models available. This topic introduces you to software licensing models.

This topic addresses the following competencies:

- **Competency 4011.1.3: Software**

The graduate identifies the role of different types of software in a computing environment and explains the fundamentals of software development.



This topic highlights the following objectives:

- Recognize software licensing agreements and why software should be properly licensed prior to installation.
- Recognize the purpose of End-User License Agreements (EULA).
- Identify characteristics of open-source and proprietary licenses.
- Identify uses of patents and copyrights.

Complete: Acrobatiq Module 14

As you complete the listed material below pay attention to the following:

- Pay attention to the different types of software licenses.
- Pay attention to the difference between proprietary, shareware, freeware, and open source.
- Reflect upon the EULAs that you have accepted. Do you make a habit of reading them?

Complete the following in the Acrobatiq course including all "Learn by Doing" and "Did I Get This?" activities:

- [Module 14: Software Licensing](#)

Complete the following:

- [Software Licensing Quiz](#)

Estimated time to complete activity: 105 minutes

Organization of a Computer

Computers are divided in two parts, the central processing unit (CPU) which is in charge of the actual processing, and every other piece of hardware which is a peripheral to the CPU. In this topic, you will be introduced to the role of the CPU and the most important peripherals.

This topic addresses the following competencies:

- **Competency 4011.1.4: Systems and Services**
The graduate recognizes and describes functions of basic computer hardware components.

This topic highlights the following objectives:

- Describe the role of a central processing unit (CPU) in a computing environment.
- Classify peripherals by their role (input, output, temporary memory, storage).

Complete: Acrobatiq Modules 5 and 6

As you complete the listed material below pay attention to the following:



- The CPU is unique for its function as the brain of the computer.
- Every component other than the CPU is a peripheral component in the computer system.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 5: Introduction to Computer Hardware](#)
- [Module 6: Components of Computer Hardware](#)

Complete the following:

- [Components of Computer Hardware Quiz](#)

Estimated time to complete activity: 105 minutes

Components of Computer Hardware

Different computers need different types of hardware. For instance, a portable device needs some sort of wireless communication card (Wi-Fi, Bluetooth, WiMax, HDSPA), while this might be unnecessary for a desktop computer. This module will introduce you to the different types of hardware and their functions.

This topic addresses the following competencies:

- **Competency 4011.1.4: Systems and Services**
The graduate recognizes and describes functions of basic computer hardware components.

This topic highlights the following objectives:

- Visually identify components of computer hardware.
- Differentiate between motherboard components, their purposes, and properties.
- Identify storage and input/output (I/O) systems including different media and file systems.

Complete: Acrobatiq Module 6

As you complete the listed material below pay attention to the following:

- Pay attention to the images so you learn how each component looks.
- Reflect on the importance of size and speed for the different types of hardware.
- Observe the computer that you are using to access this course and try to list the input and output peripherals.

Review the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:



- [Module 6: Components of Computer Hardware](#)

Note: If you completed the "Organization of a Computer" topic in this course, you should have already completed this module.

Complete the following:

- [Components of Computer Hardware Quiz](#)

Note: If you completed the "Organization of a Computer" topic in this course, you should have already completed this quiz.

Estimated time to complete activity: 90 minutes

Communication Hardware

Computers utilize special hardware to communicate among each other. Network hardware includes network cards, routers, switches, and cabling. This topic will explore the different types of hardware utilized in networking.

This topic addresses the following competencies:

- **Competency 4011.1.5: Networks**
The graduate describes the structure, function, and security associated with networks.

This topic highlights the following objectives:

- Describe the basic structure of a network.
- Describe the purpose and function of fundamental communication system hardware.

Complete: Acrobatiq Modules 8 and 9

As you complete the listed material below pay attention to the following:

- Observe the computer you are utilizing to access this course and identify the network hardware it utilizes to connect to your network.
- Build a list in your mind of all the network hardware in your home or office.

Complete the following in the Acrobatiq course including all "Learn by Doing" and "Did I Get This?" activities:

- [Module 8: Introduction to Computer Network](#)
- [Module 9: Network Hardware](#)

Complete the following quiz:



- [Network Hardware Quiz](#)

Estimated time to complete activity: 135 minutes

World Wide Web

The World Wide Web (WWW) has become a necessity for modern life. Over 78% of North Americans are connected to the Internet and the number of people with Internet access in the world has grown 5 times in the last decade. This topic explains how communication happens in the WWW.

This topic addresses the following competencies:

- **Competency 4011.1.5: Networks**
The graduate describes the structure, function, and security associated with networks.

This topic highlights the following objectives:

- Describe how communication takes place through the Internet.
- Explain the role of a domain name system (DNS).
- Identify the parts of a uniform resource locator (URL).

Complete: Acrobatiq Modules 9 and 10

As you complete the listed material below pay attention to the following:

- The Internet is a network of networks.
- The WWW is part of the Internet, but the Internet is more than just the web.
- Reflect on how you connected to the WGU servers to obtain access to this course.

Complete the following in the Acrobatiq course including all "Learn by Doing" and "Did I Get This?" activities:

- [Module 9: Network Hardware](#)
- [Module 10: World Wide Web](#)

Note: If you completed the "Communication Hardware" topic in this course, you should have already completed module 9.

Complete the following quizzes:

- [Network Hardware Quiz](#) (If you chose to complete module 9)
- [World Wide Web Quiz](#)



Estimated time to complete activity: 165 minutes

Network Security

Just as important as being able to share your information is limiting access to it to only the intended recipients. Intruders might try to gain access to your network to obtain data or gain control of your system. This topic will introduce you to the most common threats and techniques to avoid getting hacked.

This topic addresses the following competencies:

- **Competency 4011.1.5: Networks**
The graduate describes the structure, function, and security associated with networks.

This topic highlights the following objectives:

- Recognize the methods of network access security.
- Identify common threats, vulnerabilities, and mitigation techniques.
- List common security best practices.

Complete: Acrobatiq Module 11

As you complete the listed material below pay attention to the following:

- Threats and vulnerabilities are not the same.
- Reflect on your current network and list its vulnerabilities.
- Reflect on your sensitive data and how someone could use it.
- User education is one of the most important and effective mitigation techniques.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 11: Network Security and Business Implications](#)

Complete the following:

- [Network Security and Business Implications Quiz](#)

Estimated time to complete activity: 105 minutes

Software Architecture

Software architecture refers to the way a program is structured. During the years, computer scientists have evolved the way programs are built. This section will introduce you to the architecture of a typical program and some of the most popular approaches utilized nowadays.



This topic addresses the following competencies:

- **Competency 4011.1.6: Scripting and Programming**
The graduate identifies common software architectures, development techniques, and the relationship between software and its environment.

This topic highlights the following objectives:

- Differentiate between machine language and high level languages.
- State the role of the compiler.
- Describe n-tier development.
- Identify the model-view-controller (MVC) model and its parts.

Complete: Acrobatiq Module 15

As you complete the listed material below pay attention to the following:

- Programming languages and machine language are different.
- Programming languages are human readable, while machine language is not.

Complete the following in the Acrobatiq course including all "Learn by Doing" and "Did I Get This?" activities:

- [Module 15: Programming and Scripting](#)

Complete the following:

- [Programming and Scripting Quiz](#)

Estimated time to complete activity: 135 minutes

Programming Languages

There are many programming languages, each with their advantages and disadvantages. There are multiple factors involved in choosing a programming language: the platform the program is intended to run on, the easiness to write code for the function sought, and the expertise of the programming staff are some of them. This section will introduce you to the differences and similarities between programming languages as well as to the concept of algorithms.

This topic addresses the following competencies:

- **Competency 4011.1.6: Scripting and Programming**
The graduate identifies common software architectures, development techniques, and the relationship between software and its environment.

This topic highlights the following objectives:



- Differentiate between compiled and interpreted languages.
- Recognize the difference between a scripting and a programming language.
- Recognize the relationships between applications and databases.
- Define algorithm.

Complete: Acrobatiq Module 15

As you complete the listed material below pay attention to the following:

- A compiler and an interpreter serve similar roles in different architectures.
- Programming languages require multiple versions of the same application for each platform on which they will execute.
- Algorithms are a very important concept. Pay close attention!

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 15: Programming and Scripting](#)

Note: If you completed the "Software Architecture" topic in this course, you should have already completed this module.

Complete the following:

- [Programming and Scripting Quiz](#)

Note: If you completed the "Software Architecture" topic in this course, you should have already completed this quiz.

Estimated time to complete activity: 135 minutes

Data Storage and Analysis

Before we can convert raw data into organizational knowledge, we must store it, analyze it, and compile it. This topic introduces you to the basic concepts of database design.

This topic addresses the following competencies:

- **Competency 4011.1.7: Management of Data**
The graduate explains the structure and function of databases.

This topic highlights the following objectives:

- Identify different data types and their uses.
- Identify data requirements.



- Identify why it is important to ensure that data and information systems support business goals and processes.
- Define business intelligence.

Complete: Acrobatiq Modules 16, 17, and 18

As you complete the listed material below pay attention to the following:

- Each data type serves a particular purpose.
- It is always easier and less expensive to spend extra time ensuring the correct design of a database than having to modify it later.
- Reflect on the different roles associated with databases and identify the one that more closely matches your interests.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 16: Introduction to the Management of Data](#)
- [Module 17: Data Types and the Power of Databases](#)
- [Module 18: Data Management Tools A](#)
- [Module 18: Data Management Tools B](#)

Note: Module 18 covers the Business Intelligence competency. You can complete it now or in the next topic of this course titled, "Database Infrastructure."

Complete the following:

- [Data Types and the Power of Databases Quiz](#)
- [Data Management Tools Quiz](#) *(If you chose to complete module 18)*

Estimated time to complete activity: 220 minutes

Database Infrastructure

Databases come in many shapes. A spreadsheet, a phone directory, an XML file, or a relational database containing all data for an organization is some examples of databases. This topic explores some of the common types of databases and administration tasks associated with their software.

This topic addresses the following competencies:

- **Competency 4011.1.7: Management of Data**
The graduate explains the structure and function of databases.

This topic highlights the following objectives:



- Describe how data is organized in a database.
- Differentiate between different types of databases.
- Identify common database administration and maintenance tasks.

Complete: Acrobatiq Modules 17 and 18

As you complete the listed material below pay attention to the following:

- A CSV file is a database.
- XML files are hierarchical databases.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 17: Data Types and the Power of Databases](#)
- [Module 18: Data Management Tools A](#)
- [Module 18: Data Management Tools B](#)

Note: If you completed the "Data Storage and Analysis" topic in this course, you may have already completed these modules.

Complete the following quiz:

- [Data Types and the Power of Databases Quiz](#) (*If you chose to complete module 17*)
- [Data Management Tools Quiz](#) (*If you chose to complete module 18*)

Estimated time to complete activity: 210 minutes

Data Management Tools, Techniques, and Standards

Most databases depend on software called a Database Management System (DBMS) to function. DBMSs take care of all the processing functions. When applications send or request data to/from a database, the DBMS is in charge of handling the request. This topic will introduce you to some of the common features found in DBMSs and explain methods for applications to interact with databases.

This topic addresses the following competencies:

- **Competency 4011.1.7: Management of Data**
The graduate explains the structure and function of databases.

This topic highlights the following objectives:

- Understand different types of information processing.
- Describe how other applications interact with databases to create and retrieve data, including drivers.



- Identify basic structured query language (SQL) commands.

Complete: Acrobatiq Module 18

As you complete the listed material below pay attention to the following:

- A driver functions as an interpreter between an application and a DBMS.
- The SQL language is a standard; however there are small differences between the various versions of SQL.
- Most modern DBMSs can process SQL queries.
- Being an English speaker, you have a great advantage if you want to learn SQL since it is based in common English expressions.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 18: Data Management Tools A](#)
- [Module 18: Data Management Tools B](#)

Note: If you completed the "Data Storage and Analysis" topic in this course, you may have already completed this module.

Complete the following:

- [Data Management Tools Quiz](#) (*If you chose to complete module 18*)

Estimated time to complete activity: 105 minutes

The IT Department

The IT department provides multiple services to an organization from technical support to developing business applications. There are many types of professionals that work within the IT department. This topic introduces you to the structure of a typical IT department, and the different roles found within it.

This topic addresses the following competencies:

- **Competency 4011.1.8: Business of IT**
The graduate explains the role of technology in today's business environment and describes basic concepts of project management.

This topic highlights the following objectives:

- Explain the purpose of an IT department in an organization.
- Describe an IT department's internal organization and job roles within an IT department.
- Identify the importance of aligning IT goals to the business mission and goals.



- Identify opportunities for buying vs. building a solution in-house, as well as insourcing vs. outsourcing.

Complete: Acrobatiq Modules 19 and 20

As you complete the listed material below pay attention to the following:

- Pay attention to the different roles in IT and reflect on the everyday life of those professionals.
- Discuss with your mentor the different roles and which ones align more closely with your goals.
- As you learn more about an IT department, think about your study program and how it aligns to the role you wish to obtain.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 19: Introduction to the Business of IT](#)
- [Module 20: The IT Department](#)

Complete the following:

- [The IT Department Quiz](#)

Estimated time to complete activity: 135 minutes

Project Management

A project is a one-time endeavor that has a particular objective. Organizations are often working on multiple projects at a time. Project managers ensure that projects are executed according to schedule and budget. This topic introduces you to the basics of project management.

This topic addresses the following competencies:

- **Competency 4011.1.8: Business of IT**
The graduate explains the role of technology in today's business environment and describes basic concepts of project management.

This topic highlights the following objectives: **Describe the characteristics of a project and identify its phases.**

- Define project initiation, risk and business impact analysis, risk mitigation, and control.
- Define scope creep.

Complete: Acrobatiq Module 21

As you complete the listed material below pay attention to the following:



- All projects have risks. Documenting risks is the first step to mitigating them.
- Not all risks are negative.
- There are multiple ways to deal with a risk. Buying an insurance policy for instance falls within the "transference" category.
- Scope creep affects most projects and is the most common reason a project fails.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 21: Introduction to Project Management](#)

Complete the following:

- [Introduction to Project Management Quiz](#)

Estimated time to complete activity: 135 minutes

System Development Life Cycle

If you completed the project management section of this course you learned about project management in phases. The system development life cycle (SDLC) is an approach to system development that resembles the waterfall method of project management. This section will explore this approach and its use in current system development.

This topic addresses the following competencies:

- **Competency 4011.1.8: Business of IT**
The graduate explains the role of technology in today's business environment and describes basic concepts of project management.

This topic highlights the following objectives:

- Describe user needs and other information systems requirements, including security and accessibility functions.
- Identify the different types of testing.
- Describe the process of system deployment and integration with existing systems.

Complete: Acrobatiq Module 22

As you complete the listed material below pay attention to the following:

- Requirement gathering and testing are two of the most overlooked phases of the SDLC.
- There is more than one type of testing. You have probably participated in one or more types.
- It is important to consider current systems when developing new systems or enhancements.



Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 22: System Development Life Cycle](#)

Complete the following:

- [The System Development Life Cycle Quiz](#)

Estimated time to complete activity: 105 minutes

Business Continuity

What would happen to an organization if they lost power for a week? What if they lost their data due to a server failure? IT business continuity planning is vital in organizations that depend on information systems to provide their products and services. This topic will introduce you to business continuity and common techniques.

This topic addresses the following competencies:

- **Competency 4011.1.8: Business of IT**
The graduate explains the role of technology in today's business environment and describes basic concepts of project management.

This topic highlights the following objectives:

- Recognize the importance of maintaining business and process continuity.
- Explain the concepts of data backup, disaster recovery, data mirroring, and off-site storage.

Complete: Acrobatiq Module 23

As you complete the listed material below pay attention to the following:

- Reflect upon your current company's business continuity plan
- Inquire about the backup policy and disaster recovery plans of your IT department.

Complete the following in the Acrobatiq course including all " Learn by Doing" and "Did I Get This?" activities:

- [Module 23: Business Continuity](#)

Complete the following:

- [The Business Continuity Quiz](#)



Estimated time to complete activity: 105 minutes

Ethics

Codes of ethics are not the same for everyone. They vary among individuals, organizations, professions, cities, and continents. There are internal values at play in our codes of ethics as well as external values such as those imposed by professional association and local government. This topic will explore ethics in IT and influential factors.

This topic addresses the following competencies:

- **Competency 4011.1.9: Ethics in Information Technology**
The graduate evaluates ethical concerns involved in the use of technology.

This topic highlights the following objectives:

- Define computer security, ethics, and privacy.
- Identify the role of government regulations in ethics.
- Identify the role of organizational culture in ethics.

Discuss the role of professional associations and ethics standards in the IT profession.

Complete: Acrobatiq Modules 25 and 26

As you complete the listed material below pay attention to the following:

- Organizational culture plays an important role in ethics.
- Ethical values are not absolute and they vary from place to place.
- Reflect on the importance of understanding ethical values in other cultures your organization might interact with. Try to think of an example.
- If you belong to a professional association, reflect on the role it plays on your code of ethics.

Complete the following in the Acrobatiq course including all "Learn by Doing" and "Did I Get This?" activities:

- [Module 25: Introduction to Ethics](#)
- [Module 26: Ethics](#)

Complete the following:

- [Ethics Quiz](#)

Estimated time to complete activity: 135 minutes

Final Steps



Congratulations on completing the activities in this course! This course has prepared you to complete the assessments associated with this course. If you have not already been directed to complete the assessments, schedule and complete your assessments now.

First Attempt Checklist

One of the many things that makes WGU unique is its competency-based education model. If you know the material, all you have to do is prove it by passing the exam. If you can do this, you can accelerate the receipt of your degree.

If you have taken the preassessment, and have reviewed the coaching report, you may decide to go directly to a first attempt at the final exam.

In order to make sure you have the best chance possible to pass the final exam on your first attempt, the following steps should be completed successfully before you take it:

1. Complete all readings and videos in each Acrobatiq Module in the course of study, taking detailed notes as you work through this explanatory content.
2. Complete all "Learn By Doing" Activities for each Acrobatiq Module.
3. Complete all Self-checks (quiz) for each Acrobatiq Module.
4. Retake the preassessment for the course. Use the coaching report to determine where you still need to review and reach out to the course mentors with any questions you have.

If you have completed the steps above and you feel comfortable with all of the concepts presented, you are most likely ready to attempt the exam.

If you fail your first attempt, you will be required to contact the course mentor to see what went wrong and how you can prepare to ensure a successful second attempt. After determining you are ready, your course mentor will approve your request once to make another exam attempt.

Accessibility Policy

Western Governors University recognizes and fulfills its obligations under the Americans with Disabilities Act of 1990 (ADA), the Rehabilitation Act of 1973 and similar state laws. Western Governors University is committed to provide reasonable accommodation(s) to qualified disabled learners in University programs and activities as is required by applicable law(s). The Office of Student Accessibility Services serves as the principal point of contact for students seeking accommodations and can be contacted at ADASupport@wgu.edu.

Course Feedback

WGU values your input! Please submit any feedback you have using the following form:



[Course Feedback](#)