



This course supports the assessment for Spreadsheets. The course covers 3 competencies and represents 3 competency units.

Introduction

Overview

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

Getting Started

Welcome to Spreadsheets! In this course, you will study three main topics with lessons within each topic: Building Effective Spreadsheet Models, Presenting Data Graphically, and Solving Business Problems with Spreadsheets. The primary learning resource is Excel Educator that includes the text and a self-test for each lesson. Competency will be demonstrated by the successful completion of an interactive task-based assessment. To prepare for the final assessment, we strongly recommend you complete the Practice Exam located in the Preparing for Success section.

Watch the following video for an introduction to this course:

Note: To download this video, right-click the following link and choose "Save as...": [download video](#).

Competencies

This course provides guidance to help you demonstrate the following 3 competencies:

- **Competency 3024.1.1: Build Effective Spreadsheet Models**
The graduate creates functional, formatted spreadsheets using appropriate spreadsheet functions and formulas to solve business problems.
- **Competency 3024.1.2: Presenting Data Graphically**
The graduate creates charts to present spreadsheet data for use in a professional setting.
- **Competency 3024.1.3: Solving Business Problems with Spreadsheets**
The graduate demonstrates proficiency in using spreadsheet software to analyze business problems.

Course Instructor Assistance

As you prepare to demonstrate competency in this subject, remember that course instructors stand ready to help you reach your educational goals. As subject matter experts, mentors enjoy and take pride in helping students become reflective learners, problem solvers, and critical thinkers. Course instructors are excited to hear from you and eager to work with you.



Successful students report that working with a course instructor is the key to their success. Course instructors are able to share tips on approaches, tools, and skills that can help you apply the content you're studying. They also provide guidance in assessment preparation strategies and troubleshoot areas of deficiency. Even if things don't work out on your first try, course instructors act as a support system to help you prepare for another attempt. You should expect to work with course instructors for the duration of your coursework, and you are encouraged to contact them as soon as you begin. Course instructors are fully committed to your success!

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. Read the full instructions provided to ensure that you have access to all of your resources in a timely manner.

Microsoft (MS) Excel

In this course, you will also develop a basic proficiency in Microsoft (MS) Excel. Excel is the most popular spreadsheet application in the world. It's flexible and powerful enough to handle sophisticated statistical and business analyses, yet simple enough that many people use it to manage their personal budgets and help in personal decision making.

In order for Excel Educator to function properly and for you to complete the exercises in this course, you will need to have Excel available on your computer. If using a Mac, please ensure your computer is updated to the most current operating system.

The following versions are compatible on a PC:

- Excel 2013
- Excel 2016

The following versions are compatible on a Mac:

- Excel 2016

Some tablet versions of Excel are also compatible. These versions must support macros. Without macros, Excel Educator will not function properly.

Excel is part of the MS Office suite of applications. If you do not already have Excel, you can download it through MS Office 365, a cloud-based version of MS Office. Below are the steps on how to install Office 365, which includes Excel 2016, via your WGU Account:

1. Go to <https://products.office.com/en-us/student/office-in-education>
2. Enter your student email address (username@wgu.edu NOT username@my.wgu.edu)



and click 'Get Started'

1. View the [Screenshot](#)
3. Click "Sign Up". The system should detect that you already have an account.
4. Enter your date of birth and click "Start".
5. You can skip the step to invite more people. Be aware that it can take from 5 to 15 minutes to move to access your account.
 1. View the [Screenshot](#)
6. Once in your account, you can press "Install Office 2016" in the top right corner.
 1. View the [Screenshot](#)
 2. If you do experience problems or require assistance completing these steps, please contact the [IT Service Desk](#).

If you get an error message that you are using the incorrect password.

- Student can access their MS Office 365 account using the following credentials:
 - Email: Your WGU Student Email of username@wgu.edu (NOT username@my.wgu.edu)
 - Password: Your WGU Portal Password
- If you recently called the IT Service Desk for a new WGU password, and have not reset the password yourself, please follow the steps in [Changing your MYWGU Password](#). Once you changes your password, reattempt to access your MS Office 365 account with your WGU student email and your new password.

If you get the error "Please contact your admin. It looks like they haven't assigned you a license for the Office desktop apps."

- View the [Screenshot](#)
- If this error displays, verify that you have completed the numbered steps above. If you require your assistance completing these steps, please contact the [IT Service Desk](#).

To access your WGU student Office 365 account after initial setup:

1. Go to portal.office.com.
2. Enter your WGU email address of username@wgu.edu (NOT username@my.wgu.edu). Use your WGU portal password.
3. Once logged in:
 1. You may use the Online Office Applications without Installing Office 2016.
 2. You may install Office 2016 link. This should detect whether you're using a MAC or PC and install the appropriate version. You may install Office on up to 5 PCs or MACs, 5 tablets, and 5 smartphones.
 3. View the [Screenshot](#)

If you experience any problems and require assistance, please contact the [IT Service Desk](#).

If you need assistance contact the WGU IT Help Desk at (877) 435-7948.



MyEducator

You will access *MyEducator Spreadsheets Excel Educator* modules by clicking the links throughout your course. **IMPORTANT:** Please verify your system meets the requirements to successfully run this resource. Click [here](#) to view those requirements.

- [Spreadsheets Excel Educator](#)

Additional Preparation

It would be difficult to find a career in accounting that does not involve technology to a great degree. Your ability to leverage technology in the workplace can give you an advantage over your colleagues and make you more valuable to your organization. You will gain skills you will use in your other coursework at WGU as well as in both your professional career and your personal life.

Throughout this course you will complete structured lessons that contain instructional text and videos. There is 100% overlap between the text and the videos, so you can choose which medium is better for you and how you learn. We find that most people prefer to watch the videos and use the text when they are looking up something specific, like the set of arguments required for a function.

Assessments

In addition to the text and videos, you will find opportunities throughout the book to work through activities, called assessments, to apply what you have learned. Each assessment contains a data file that you will download and complete on your computer in Excel. Once you have completed an assessment, you will submit it for grading. The grading process takes only a few seconds; once it is complete, you are presented detailed feedback about how you did on the assessment. Your score and feedback on the assessment will automatically be stored with your instructional materials so that you can review them later.

There are two types of assessments in the book: Practice problems and Test Your Skills problems. Practice problems are designed to help you apply the skills you are learning in that section of a lesson. You will notice that there are step-by-step instructions and videos that walk you through the process of completing practice problems. Test Your Skills problems are designed to help you assess your mastery of the topics for a lesson. These problems do not have step-by-step instructions or instructional videos, but you will receive feedback on your performance.

Pacing and Topics

The pacing and topics 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 and topics guide carefully to complete the course in the suggested timeframe.

Week 1



- Formatting Spreadsheets
- Formulas and Functions

Week 2

- Logic and Reference Functions
- Date Time and Text Functions

Week 3

- Graphic Displays of Spreadsheet Data
- Building Business Spreadsheet Models

Week 4

- Advanced Modeling
- Using Spreadsheet Models for Decision-Making

Week 5

- Analyzing Data with Pivot Tables

Week 6

- 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.

Practice Exam

To test your knowledge on the concepts of this course, take the Practice Exam to help identify any knowledge and skill gap you may have. Complete the coursework and work closely with your course instructor to address your knowledge and skill gap prior to taking the final assessment (Final Exam).

[Practice Exam](#)

A Student Feedback Report will be generated when you submit the Practice Exam. This feedback report will replace the WGU traditional coaching report. [The Coaching Reports for the Practice Exam and TYS Sections video](#) will guide you on how to access your feedback in My Educator. Below are the following steps. Please take the following steps to access the Student Feedback Report after you have completed and submitted the Practice Exam.

1. Access the Excel Educator course the same way you access any other lessons in the Course of Study.
2. On the upper right-hand corner next to your name, click the "Course" tab.



3. In the drop-down menu in Excel Educator, click "Assessments".
4. You will see a list of your last attempts on any files submitted for lessons, the practice exam or final exam. Click on any of your last attempts to access the Student Feedback Report.

Building Effective Spreadsheet Models

Excel is a critically important business application. It provides managers with the capability to perform sophisticated and powerful analyses, including connecting with corporate databases with hundreds of thousands of records, within moments. At the same time, it is intuitive and straightforward to use. It would be hard to find any business, small or large, whose managers do not rely on Excel in their daily work.

In this course you will start with the basics, but will quickly demonstrate how to use some of the most advanced features of Excel. By the end of this section, you will be able to build your own spreadsheet models using some of Excel's many built-in functions.

Formatting Spreadsheets

Before you can build spreadsheet models, you must first understand the basic building blocks of a spreadsheet. This topic will present the basic vocabulary of spreadsheet files, show you how to enter data in a spreadsheet file, and outline how to change the way that data is presented.

This topic addresses the following competency:

- **Competency 3024.1.1: Build Effective Spreadsheet Models**
The graduate creates functional, formatted spreadsheets using appropriate spreadsheet functions and formulas to solve business problems.

This topic highlights the following objectives:

- Describe the purpose and uses of spreadsheets.
- Describe the components of spreadsheets using appropriate vocabulary.
- Format spreadsheet cells and worksheets for organized views of data.
- Use sorting and filtering functions of spreadsheets to highlight data patterns.

Download: MS Excel

Excel is part of the MS Office suite of applications. If you do not already have Excel, you can download it through MS Office 365, a cloud-based version of MS Office. Below are the steps on how to install Office 365, which includes Excel 2016, via your WGU Account:

1. Open [Office 365](#)
2. Enter your @wgu.edu e-mail address. Press Enter or Tab and you will be taken to WGU's organizational account.
 1. View the [Screenshot](#)
3. Enter your WGU portal password.
4. Once logged into your WGU Office 365 account, you can choose to install office using the Install Office 2016 link. This should detect whether you're using a MAC or PC and



install the appropriate version.

5. Installation from this point forward should be straightforward. Open [Office Help](#) for additional install instructions.

If you need assistance contact the WGU IT Help Desk at (877) 435-7948.

Complete: Excel Basics

In this section you will learn how to work with Excel workbooks, worksheets, and cells. In particular, you will learn how to add and edit information in a spreadsheet. You will also learn how to change the appearance of the data in your workbook files. Complete the module linked below, including reading or viewing the videos and doing the practice problems.

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

- Getting Started with Excel
- Cells and Worksheets
- Formatting Cells and Sheets
- Sorting and Filtering
- Test Your Skills: Excel Basics

Read and complete the following lesson material in [Excel Educator](#):

- Lesson 1 (“Excel Basics”)
- Test Your Skills: Excel Basics
 - Download and complete the Test Your Skills assessment file for this module.

Formulas and Functions

Building effective spreadsheet models requires you to complete calculations in spreadsheets. We use formulas and functions to perform these calculations. By the end of this section, you will be able to perform simple calculations in Excel using formulas and functions.

This topic addresses the following competency:

- **Competency 3024.1.1: Build Effective Spreadsheet Models**
The graduate creates functional, formatted spreadsheets using appropriate spreadsheet functions and formulas to solve business problems.

This topic highlights the following objectives:

- Create formulas to perform simple arithmetic with values in cells.
- Create formulas to calculate summary statistics.
- Create or edit formulas that use the time value of money to perform financial calculations.
- Locate errors in a spreadsheet, including formulas and results.
- Correct errors in the spreadsheet formula using the audit function.

Complete: Formulas and Functions



In this section you will perform arithmetic on numbers in your spreadsheets. You will also learn the basics of performing calculations using spreadsheet functions. Complete the module linked below, including completing the reading, viewing the videos, and doing the practice problems.

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

- References and Calculations
- Summary Statistics Functions
- Financial Functions
- Formula Auditing

Access the following lesson material in [Excel Educator](#):

- Lesson 2 (“Formula and Functions” Sections 2.1 through 2.4)
- Test Your Skills: Formulas and Functions
 - Download and complete the Test Your Skills assessment file for this module.

Logic and Reference Functions

Most spreadsheet models require more than simple calculations. Often we need to incorporate “smart” functions whose calculations can change depending on the data in our models. These “smart” functions are referred to as logic and reference functions. By the end of this section, you will be able to perform calculations using logic and reference functions.

This topic addresses the following competency:

- **Competency 3024.1.1: Build Effective Spreadsheet Models**
The graduate creates functional, formatted spreadsheets using appropriate spreadsheet functions and formulas to solve business problems.

This topic highlights the following objectives:

- Use Boolean logic statements in an Excel formula.
- Use the IF function to perform complex calculations.
- Use the VLOOKUP and HLOOKUP functions to simplify complicated tasks.
- Use the SUMIF, COUNTIF, and AVERAGEIF functions to perform complex calculations.
- Use validation tools to restrict allowable values in a spreadsheet

Complete: Logic and Reference Functions

By the end of this section you will use complex functions in Excel to perform “smart” calculations. These functions are key building blocks for creating sophisticated spreadsheet models. Complete the module linked below, including completing the reading, viewing the videos, and doing the practice problems.

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

- Boolean Functions



- The "IF" Function
- Conditional Functions
- Reference Functions

Read and complete the following lesson material in [Excel Educator](#):

- Lesson 3 (“Logic and Reference Functions” Sections 3.1 through 3.4)
- Test Your Skills: Logic and Reference Functions
 - Download and complete the Test Your Skills assessment file for this module.

Date, Time, and Text Functions

Spreadsheet models can be an effective way for managers to present data to their colleagues. To present data well in a spreadsheet, you will need to effectively use text and date/time elements to your spreadsheet models. By the end of this section, you will be able to use functions that manipulate text and add date and time information to your spreadsheet models.

This topic addresses the following competency:

- **Competency 3024.1.1: Build Effective Spreadsheet Models**
The graduate creates functional, formatted spreadsheets using appropriate spreadsheet functions and formulas to solve business problems.

This topic highlights the following objectives:

- Use Day/Time functions to annotate and add context to spreadsheet data.
- Use text functions to annotate and add context to spreadsheet data.

Complete: Date, Time, and Text Functions

By the end of this section you will learn to enrich your spreadsheets by adding date and text to your calculations. Date and text elements of your worksheets provide context and add meaning to the calculations. Complete the module linked below, including completing the reading, viewing the videos, and doing the practice problems.

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

- Date and Time Functions
- Text Functions

Read and complete the following lesson material in [Excel Educator](#):

- Lesson 4 (“Date, Time, and Text Functions” Sections 4.1 and 4.2)
- Test Your Skills: Date, Time, and Text Functions
 - Download and complete the Test Your Skills assessment file for this module.

Presenting Data Graphically

There are times that raw numbers in a spreadsheet don't tell the whole story. It is often



beneficial to create a visual representation of a dataset to fully appreciate what the numbers mean. Excel has a powerful and comprehensive set of tools that allow you to create professional charts and graphs.

Graphic Displays of Spreadsheet Data

Visually depicting numbers on a chart can be an effective way to communicate the results of your data analyses. By the end of this section of the course, you will be able to use the charting features in Excel to effectively present the data in your spreadsheets in appropriate charts.

This topic addresses the following competency:

- **Competency 3024.1.2: Presenting Data Graphically**
The graduate creates charts to present spreadsheet data for use in a professional setting.

This topic highlights the following objectives:

- Distinguish between different types of charts and how to use them appropriately in a given situation.
- Display data graphically using different charting features.
- Use formatting tools to modify a chart.

Complete: Charting

In this lesson you will learn how to use Excel's charting environment. You also use Excel to create several different types of charts. Complete the module linked below including completing the reading, viewing the videos, and doing the practice problems.

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

- The Charting Environment
- Column Charts
- Stacked Column Charts
- Pie Charts
- Line Charts

Read and complete the following lesson material in [Excel Educator](#):

- Lesson 5 ("Charting" Sections 5.1 through 5.5)
- Test Your Skills: Charting
 - Download and complete the Test Your Skills assessment file for this module.

Solving Business Problems with Spreadsheets

Building models allows you to use spreadsheets to make good decisions based on sophisticated and relevant analyses of the problems you are trying to solve. Models can be very useful for decision making in many different settings. Once you are able to model a process by building a spreadsheet you will likely find that Excel is one of the first tools you will use in



problem solving.

Build Business Spreadsheets Models

One of the most powerful things you will do with spreadsheets is model real-world processes in order to make business decisions. By the end of this section you will understand the parts of a spreadsheet model, perform what-if analyses, and make managerial recommendations based on the analyses you perform.

This topic addresses the following competency:

- **Competency 3024.1.3: Solving Business Problems with Spreadsheets**
The graduate demonstrates proficiency in using spreadsheet software to analyze business problems.

This topic highlights the following objectives:

- Describe the parts of a spreadsheet model.
- Use spreadsheet functions to perform what-if analysis for managerial decision making.
- Make a recommendation for a given situation based on the data analyzed in a spreadsheet model.

Complete: Basic Modeling

By the end of this section you will be able to build basic spreadsheet models of business processes. You will also use the what-if analysis tools in Excel to aid in decision making. Complete the module linked below, including completing the reading, viewing the videos, and doing the practice problems.

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

- Building Spreadsheet Models
- Analyzing Spreadsheet Models Using What-If Analyses

Read and complete the following lesson material in [Excel Educator](#):

- Lesson 6 (“Basic Modeling” Sections 6.1 and 6.2)
- Test Your Skills: Modeling Basics
 - Download and complete the Test Your Skills assessment file for this module.

Advanced Modeling

At times it becomes necessary to build large or complex spreadsheet models. By the end of this section, you will be able to build spreadsheet models that use named ranges, span multiple worksheets, and incorporate feedback using iterative calculations.

This topic addresses the following competency:

- **Competency 3024.1.3: Solving Business Problems with Spreadsheets**
The graduate demonstrates proficiency in using spreadsheet software to analyze



business problems.

This topic highlights the following objectives:

- Build a complex workbook using multiple worksheets, including a summary worksheet.
- Explain how iterative calculations work in a spreadsheet model for a given situation.

Complete: Advanced Modeling

By the end of this section you will be able to create advanced spreadsheet models. These models will use named ranges, span multiple worksheets, and use iterative calculations. Complete the module linked below, including completing the reading, viewing the videos, and doing the practice problems.

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

- Creating Named Ranges
- Using Multiple Worksheets
- Working with Circular References in Excel

Read and complete the following lesson material in [Excel Educator](#):

- Lesson 7 (“Advanced Modeling” Sections 7.1 and 7.2)
- Test Your Skills: Advanced Modeling
 - Download and complete the Test Your Skills assessment file for this module.

Using Spreadsheet Models for Decision Making I

One of the most difficult parts of doing effective analysis in Excel is getting the inputs to your spreadsheet models correct. The famous expression, “garbage in, garbage out,” which means that even if you are completing the right calculation you will not get the right results if the data you are using in your calculation are incorrect. By the end of this section, you will be able to use statistics to determine appropriate inputs to your spreadsheet models.

This topic addresses the following competency:

- **Competency 3024.1.3: Solving Business Problems with Spreadsheets**
The graduate demonstrates proficiency in using spreadsheet software to analyze business problems.

This topic highlights the following objectives:

- Explain the outputs from some advanced statistical functions.
- Use spreadsheet functions to conduct optimization analysis.

Complete: Statistics

By the end of this lesson, you will be able to use important statistical functions to aid in managerial decision making. Complete the module linked below, including completing the



reading, viewing the videos, and doing the practice problems.

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

- Determining Model Inputs

Read and complete the following lesson material in [Excel Educator](#):

- Lesson 8 (“Statistics” Sections 8.1)
- Test Your Skills: Statistics
 - Download and complete the Test Your Skills assessment file for this module.

Complete: Optimization Analysis

Many business decisions require that managers examine a problem from multiple and, at times, conflicting points of view. These problems rarely have a “right” answer, but involve finding the best possible solution given the constraints to the problem. After completing this section you will be able use one technique, called optimization analysis, to solve this type of business problem. Complete the module linked below, including completing the reading, viewing the videos and doing the practice problems.

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

- Building Optimization Models
- Using Solver for Optimization

Using Spreadsheet Models for Decision Making II

Read and complete the following lesson material in [Excel Educator](#):

- Lesson 10 (“Optimization Analysis” Sections 10.1, 10.2)
- Test Your Skills: Solver (10.3)
 - Download and complete the Test Your Skills assessment file for this module.

Analyzing Data with PivotTables

In many cases the data that we need to solve a problem are available to use, but it is not organized well or there is so much information available that it is difficult to make sense of it. By the end of this section you will be able to use PivotTables to organize and analyze data.

This topic addresses the following competency:

- **Competency 3024.1.3: Solving Business Problems with Spreadsheets**
The graduate demonstrates proficiency in using spreadsheet software to analyze business problems.

This topic highlights the following objectives:

- Explain the benefits of using PivotTables to analyze data.
- Perform calculations on multi-varied data using PivotTable functions.



- Use PivotTables to analyze qualitative or categorical data.

Complete: Analyzing Data with PivotTables

PivotTables are a powerful tool for organizing and analyzing large amounts of data. By the end of this section, you will be able to create PivotTables and arrange them to organize and analyze large data sets. Complete the module linked below, including completing the reading, viewing the videos, and doing the practice problems.

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

- PivotTables

Read and complete the following lesson material in [Excel Educator](#):

- Lesson 9 (“PivotTables” Sections 9.1)
- Test Your Skills: PivotTables
 - Download and complete the Test Your Skills assessment file for this module.

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 them now.

If you have not taken the Practice Exam located in the Prepare for Success section, we strongly recommend you complete the practice exam before taking the final assessment (Final Exam).

- [Practice Exam](#)

A Student Feedback Report will be generated when you submit the practice exam and the final assessment (Final Exam). This feedback report will replace the WGU traditional coaching report. [The Coaching Reports for the Practice Exam and TYS Sections video](#) will guide you on how to access your feedback in My Educator. Review of the Student Feedback Report will help increase your competency in the next attempt. Please take the following steps to access the Student Feedback Report after you have completed and submitted the Practice Exam or the Final Exam.

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2. On the upper right-hand corner next to your name, click the “Course” tab.
3. In the drop-down menu, click “Assessments”.
4. You will see a list of your last attempts on any files submitted for lessons, the practice exam or final exam. Click on any of your last attempts to access the Student Feedback Report.