



Your competence will be assessed as you complete the BAC1 objective assessment for this course of study. This course of study represents 2 competency units and may take up to 4 weeks to complete.

## Introduction

### Overview

Welcome to the Foundations of College Mathematics course of study. The Foundations of College Mathematics domain is designed to help you prepare for your future study of mathematics at Western Governors University (WGU). Throughout this course of study, you will be completing activities designed to help you work through areas from basic fractions and the real number system, to algebra and geometry, and eventually through probability and statistics.

### Outcomes and Evaluation

There are 4 competency statements covered by this course of study; they are listed in the "[Competencies for Foundations of College Mathematics \(BAC1\)](#)" page.

### Pre-Assessment

You will complete the following pre-assessment:

- PBAC

### Objective Assessment

You will complete the following objective assessment:

- BAC1

## Preparing for Success

The information in this section is provided to help you become ready to complete this course of study. As you proceed, you will need to be organized in your studies in order to gain competency in the indicated areas and prepare yourself to pass the final assessment.

### Your Learning Resources

The Learning Resource you will use for this course of study is the Foundations of College Mathematics- MyFoundationsLab. Your enrollment in the Learning Resource is an automatic process that occurs on or **near the 10th day** of the first month of your first term.

### Enroll in Learning Resources

The Learning Resource you will use for this course of study is the Foundations of College Mathematics- MyFoundationsLab. Your enrollment in the Learning Resource is an automatic process that occurs on or **near the 10th day** of the first month of your first term. Use your original WGU portal login information. To access



MyFoundationsLab, follow these steps:

1. Go to [wgu.mylabsplus.com](http://wgu.mylabsplus.com)
2. Login with your original WGU portal information
3. Click on MyFoundationsLab
4. Follow the instructions to get started

If you have any questions about your learning resource enrollment in MyFoundationsLab, please contact the WGU Learning Resources department by email at [learningR@wgu.edu](mailto:learningR@wgu.edu) anytime or by phone at 1-866-895-9660 ext. 3124 8:00 am - 5:00 pm Mountain Monday through Friday.

## **Additional Preparation**

There are many different learning tools available to you within your course of study in addition to the learning resources already discussed. Take the time to familiarize yourself with them and determine how best to fit them into your learning process.

### **Message Boards, FAQs, Note-Taking Tool**

Message boards, FAQs, and a note-taking tool are available in every course of study.

Use the "[Additional Learning Tools](#)" page to review these tools.

### **Course Mentor Assistance**

Course mentors are available to help you. Their job is to aid understanding in areas where you need to improve and to guide you to learning resources. Request their help as needed when preparing for assessment.

Course mentors cannot provide reviews of entire assessments. If you fail assessment attempts, review the provided feedback first, then ask the course mentor specific questions about what you can do to meet the competency standard. Request course mentor assistance as necessary in preparing for second attempts at objective assessment or performance task revisions. Mentors cannot guarantee you pass as they do not evaluate assessments; however, they can provide the assistance and advice necessary to help you succeed.

### **Secure a Calculator and Gather Recommended Tools**

It is highly recommended that you secure and use either a scientific or graphing calculator while working through this course of study and during your assessment.

Read the "[WGU Calculator and Scratch Paper Guidelines](#)" page to see a partial listing of permitted as well as prohibited calculators for this particular assessment area.

You may also use graphing paper, a ruler, a compass, and a protractor if desired.

### **Explore Your Resources**



Review the presentation below to understand how to use MyFoundationsLab and this course of study so that these resources can help you master the competencies for BAC1.

- [Foundations of College Mathematics Getting Started Presentation](#)

Should you have any questions about the presentation, contact a course mentor for clarification and/or assistance.

### **A Note on Completing the Pre-Assessment**

The official pre-assessment, PBAC, is a tool that you can also use to measure your competence. If you have an extensive background in mathematics, speak with your mentor about taking the PBAC pre-assessment at this time to potentially accelerate your studies. If you do not have an extensive background in mathematics, take the PBAC pre-assessment after you have worked through all units in this course of study.

## **Foundational Math Topics**

You will go through whole numbers, fractions, decimals, ratios, proportions, percents, geometry, statistics, real numbers, equations, and graphing and gain competency in each area.

### **Unit 1-Whole Numbers**

Without a basic understanding of the counting numbers, people would find themselves lost. Every individual constantly uses counting numbers, no matter what the person's occupation. Real numbers answer such basic questions as how many people are coming to dinner and how many hours are in a day. Whole numbers relate to issues such as how many apartment complexes are in a building, the number of available parking spaces, or the cartons of milk you need to buy. In this unit you will review the basic operations of whole numbers including rounding and order of operations.

#### **Whole Numbers: Workout**

Complete the [unit Workout](#) for whole numbers. The Workout is intended to measure your background knowledge of the unit topic and is a tool for accelerating in MyFoundationsLab. If you score 75% or better on the Workout, you are considered competent in whole numbers, and you may skip all remaining activities in this topic. If you score below 75%, please move to the next activity.

#### **Whole Numbers: Required Homework**

Complete [the Required Homework](#) section of the whole numbers unit. The exercises in this unit are intended to build your competency in the unit topic. Please work through these problems carefully to prepare for the whole numbers posttest and the BAC1 assessment. Please keep in mind that the resource buttons on the right side of the unit activity screen will help you better understand the material through study tools, sample problems, and solutions. You must score 75% or better on the



Required Homework exercises to move on to the next activity.

### **Whole Numbers: Posttest**

Take the posttest for [the whole numbers unit](#). If you score 75% or better you are considered competent in this topic, and you may skip all remaining steps in this process. If you score below 75%, please move to the next activity.

### **Whole Numbers: Study Plan**

The exercises are customized by MyFoundationsLab to build competency in your weakest areas as determined by your performance on the whole numbers posttest. MyFoundationsLab marks the exercises you should review with a pencil icon. Work through the problems marked with a pencil icon in the study plan for the [whole numbers unit](#). Once you have completed these exercises, go back and take the whole numbers posttest again.

## **Unit 2-Fractions**

Fractions are a very important part of math. Just think of how many times a day you have to assess a situation, divide up a workload, drive a car, or even plan a meal. In this unit you will learn how to add, subtract, multiply, and divide fractions. You will be able to write fractions in their different forms and identify equivalent fractions. You will also learn to use fractions in real-world applications.

### **Fractions: Workout**

Complete the unit Workout [for fractions](#). The Workout is intended to measure your background knowledge of the unit topic and is a tool for accelerating in MyFoundationsLab. If you score 75% or better on the Workout, you are considered competent in fractions, and you may skip all remaining activities in this topic. If you score below 75%, please move to the next activity.

### **Fractions: Required Homework**

Complete the Required Homework section of the [fractions unit](#). The exercises in this unit are intended to build your competency in the unit topic. Please work through these problems carefully to prepare for the fractions posttest and the BAC1 assessment. Please keep in mind that the resource buttons on the right side of the unit activity screen will help you better understand the material through study tools, sample problems, and solutions. You must score 75% or better on the Required Homework exercises to move on to the next activity.

### **Fractions: Posttest**

Take the posttest for the [fractions unit](#). If you score 75% or better you are considered competent in this topic, and you may skip all remaining steps in this process. If you score below 75%, please move to the next activity.

### **Fractions: Study Plan**

The exercises are customized by MyFoundationsLab to build competency in your weakest areas as determined by your performance on the fractions posttest.



MyFoundationsLab marks the exercises you should review with a pencil icon. Work through problems marked with a pencil icon in the study plan for the [fraction unit](#). Once you have completed these exercises, go back and take the fractions posttest again.

## **Unit 3-Decimals**

The zero and the counting numbers (1, 2, 3 . . .) make up the set of whole numbers. Not every number is a whole number. The decimal system lets you write numbers of all types and sizes using a clever symbol called the decimal point. As you move to the right of the decimal point, each place value is divided by 10. In this unit you will learn how to add, subtract, multiply, and divide decimals. You will be able to write round decimals to a specified place value and convert them to fractions and percentages. You will also learn to use decimals in real-world applications.

### **Decimals: Workout**

Complete the unit Workout for the [decimals unit](#). The Workout is intended to measure your background knowledge of the unit topic and is a tool for accelerating in MyFoundationsLab. If you score 75% or better on the Workout, you are considered competent in decimals, and you may skip all remaining activities in this topic. If you score below 75%, please move to the next activity.

### **Decimals: Required Homework**

Complete the Required Homework section of the [decimals unit](#). The exercises in this unit are intended to build your competency in the unit topic. Please work through these problems carefully to prepare for the decimals posttest and the BAC1 assessment. Please keep in mind that the resource buttons on the right side of the unit activity screen will help you better understand the material through study tools, sample problems, and solutions. You must score 75% or better on the Required Homework exercises to move on to the next activity.

### **Decimals: Posttest**

Take the posttest for [the decimal unit](#). If you score 75% or better you are considered competent in this topic, and you may skip all remaining steps in this process. If you score below 75%, please move to the next activity.

### **Decimals: Study Plan**

The exercises are customized by MyFoundationsLab to build competency in your weakest areas as determined by your performance on the decimals posttest. MyFoundationsLab marks the exercises you should review with a pencil icon. Work through problems marked with a pencil icon in the study plan for [the decimals unit](#). Once you have completed these exercises, go back and take the decimals posttest again.

## **Unit 4-Ratios, Proportions, and Percents**

When do you use proportions and ratios? You use them every day whether you realize it or not. Do you ever talk about how long it will take you to arrive at your destination if you are going 65 miles per hour? Have you ever seen prices such as



\$1.39 per pound, \$6 per foot, or \$3.49 per gallon? Have you ever figured how much something costs given the price per pound, per gallon, etc.? This means you have used ratios and proportions.

In this unit you will learn how to set up ratios and proportions and use them in the context of percents and other rates. You will be able to write ratios, proportions, and percents in their different forms and solve problems. You will also learn to use ratios, proportions, and percents in real-world applications.

### **Ratios, Proportions, and Percents: Workout**

Complete the unit Workout for [ratios, proportions, and percents](#). The Workout is intended to measure your background knowledge of the unit topic and is a tool for accelerating in MyFoundationsLab. If you score 75% or better on the Workout, you are considered competent in ratios, proportions, and percents, and you may skip all remaining activities in this topic. If you score below 75%, please move to the next activity.

### **Ratios, Proportions, and Percents: Required Homework**

Complete the Required Homework section of the [ratios, proportions, and percents unit](#). The exercises in this unit are intended to build your competency in the unit topic. Please work through these problems carefully to prepare for the ratios, proportions, and percents posttest and the BAC1 assessment. Please keep in mind that the resource buttons on the right side of the unit activity screen will help you better understand the material through study tools, sample problems, and solutions. You must score 75% or better on the Required Homework exercises to move on to the next activity.

### **Ratios, Proportions, and Percents: Posttest**

Take the posttest for the [ratios, proportions, and percents unit](#). If you score 75% or better you are considered competent in this topic, and you may skip all remaining steps in this process. If you score below 75%, please move to the next activity.

### **Ratios, Proportions, and Percents: Study Plan**

The exercises are customized by MyFoundationsLab to build competency in your weakest areas as determined by your performance on the ratios, proportions, and percents posttest. MyFoundationsLab marks the exercises you should review with a pencil icon. Work through problems marked with a pencil icon in the study plan for the [ratios, proportions, and percents unit](#). Once you have completed these exercises, go back and take the ratios, proportions, and percents posttest again.

## **Unit 5-Geometry**

Perhaps you are planting a garden. The bag of soil can cover 100 square feet. How will you know how many bags you will need? In this unit you will study basic geometric forms as well as the formulas involved in calculating associated measures. You will also learn to use geometric principles in real-world applications.

### **Geometry: Workout**





Complete the unit Workout for [geometry](#). The Workout is intended to measure your background knowledge of the unit topic and is a tool for accelerating in MyFoundationsLab. If you score 75% or better on the Workout, you are considered competent in geometry, and you may skip all remaining activities in this topic. If you score below 75%, please move to the next activity.

**Geometry: Required Homework**

Complete the Required Homework section of the [geometry unit](#). The exercises in this unit are intended to build your competency in the unit topic. Please work through these problems carefully to prepare for the geometry posttest and the BAC1 assessment. Please keep in mind that the resource buttons on the right side of the unit activity screen will help you better understand the material through study tools, sample problems, and solutions. You must score 75% or better on the Required Homework exercises to move on to the next activity.

**Geometry: Posttest**

Take the posttest for the [geometry unit](#). If you score 75% or better, you are considered competent in this topic, and you may skip all remaining steps in this process. If you score below 75%, please move to the next activity.

**Geometry: Study Plan**

The exercises are customized by MyFoundationsLab to build competency in your weakest areas as determined by your performance on the geometry posttest. MyFoundationsLab marks the exercises you should review with a pencil icon. Work through problems marked with a pencil icon in the study plan for the [geometry unit](#). Once you have completed these exercises, go back and take the geometry posttest again.

**Unit 6-Statistics and Probability**

It is important to study and understand statistics and probability because you will encounter the use of it in your everyday life. You see election results and comparisons of financial data. If you are a baseball fan, statistics and probability is used to determine hitting and pitching percentages. In this unit you will study the relationships between graphs and their data, and you will be able to determine valid representations of numeric information. You will also learn to calculate descriptors of real-world data sets.

**Statistics and Probability: Workout**

Complete the unit Workout for [statistics and probability](#). The Workout is intended to measure your background knowledge of the unit topic and is a tool for accelerating in MyFoundationsLab. If you score 75% or better on the Workout, you are considered competent in statistics and probability, and you may skip all remaining activities in this topic. If you score below 75%, please move to the next activity.

**Statistics and Probability: Required Homework**

Complete the Required Homework section of the [statistics and probability unit](#). The



exercises in this unit are intended to build your competency in the unit topic. Please work through these problems carefully to prepare for the statistics and probability posttest and the BAC1 assessment. Please keep in mind that the resource buttons on the right side of the unit activity screen will help you better understand the material through study tools, sample problems, and solutions. You must score 75% or better on the Required Homework exercises to move on to the next activity.

### **Statistics and Probability: Posttest**

Take the posttest for the [statistics and probability unit](#). If you score 75% or better, you are considered competent in this topic, and you may skip all remaining steps in this process. If you score below 75%, please move to next activity.

### **Statistics and Probability: Study Plan**

The exercises are customized by MyFoundationsLab to build competency in your weakest areas as determined by your performance on the statistics and probability posttest. MyFoundationsLab marks the exercises you should review with a pencil icon. Work through problems marked with a pencil icon in the study plan for the [statistics and probability unit](#). Once you have completed these exercises, go back and take the statistics and probability posttest again.

## **Unit 7-The Real Number System**

Do you have a checking account? Real numbers are used to show when you have more than zero dollars in your bank account and when you have a negative amount. In this unit you will study the basic operations of addition, subtraction, multiplication, and division of real numbers. You will learn to apply the order of operations and the distribution property in order to simplify algebraic expressions.

### **Real Number System: Workout**

Complete the unit Workout for [real number system](#). The Workout is intended to measure your background knowledge of the unit topic and is a tool for accelerating in MyFoundationsLab. If you score 75% or better on the Workout, you are considered competent in real number systems, and you may skip all remaining steps in this topic. If you score below 75%, please move to the next activity.

### **Real Number System: Required Homework**

Complete the Required Homework section of the [real number system unit](#). The exercises in this unit are intended to build your competency in the unit topic. Please work through these problems carefully to prepare for the real number system posttest and the BAC1 assessment. Please keep in mind that the resource buttons on the right side of the unit activity screen will help you better understand the material through study tools, sample problems, and solutions. You must score 75% or better on the Required Homework exercises to move on to the next activity.

### **Real Number System: Posttest**

Take the posttest for the [real number system unit](#). If you score 75% or better, you





are considered competent in this topic, and you may skip all remaining steps in this process. If you score below 75%, please move to the next activity.

### **Real Number System: Study Plan**

The exercises are customized by MyFoundationsLab to build competency in your weakest areas as determined by your performance on the real number system posttest. MyFoundationsLab marks the exercises you should review with a pencil icon. Work through the problems marked with a pencil icon in the study plan for the [real number system unit](#). Once you have completed these exercises, go back and take the real number system posttest again.

## **Unit 8-Equations, Inequalities, and Applications**

What will be the monthly payment on your mortgage? Which route should you drive to New York? In order to answer such questions, it is necessary to have certain information. Problems in which a question is asked and certain information is given in the form of words are called word problems. Word problems can be worked out by setting up an equation containing the unknown and then solving for the unknown. In this unit you will study linear equations and inequalities. You will use the properties of real numbers to solve basic algebraic equations and expressions. You will use basic algebraic skills to solve real-world applications.

### **Equations, Inequalities, and Applications: Workout**

Complete the unit Workout for [equations, inequalities, and applications](#). The Workout is intended to measure your background knowledge of the unit topic and is a tool for accelerating in MyFoundationsLab. If you score 75% or better on the Workout, you are considered competent in equations, inequalities, and applications, and you may skip all remaining activities in this topic. If you score below 75%, please move to the next activity.

### **Equations, Inequalities, and Applications: Required Homework**

Complete the Required Homework section of the [equations, inequalities, and applications unit](#). The exercises in this unit are intended to build your competency in the unit topic. Please work through these problems carefully to prepare for the equations, inequalities, and applications posttest and the BAC1 assessment. Please keep in mind that the resource buttons on the right side of the unit activity screen will help you better understand the material through study tools, sample problems, and solutions. You must score 75% or better on the Required Homework exercises to move on to the next activity.

### **Equations, Inequalities, and Applications: Posttest**

Take the posttest for the [equations, inequalities, and applications unit](#). If you score 75% or better, you are considered competent in this topic, and you may skip all remaining steps in this process. If you score below 75%, please move to the next activity.

### **Equations, Inequalities, and Applications: Study Plan**



The exercises are customized by MyFoundationsLab to build competency in your weakest areas as determined by your performance on the equations, inequalities, and applications posttest. MyFoundationsLab marks the exercises you should review with a pencil icon. Work through problems marked with a pencil icon in the study plan for the [equations, inequalities, and applications unit](#). Once you have completed these exercises, go back and take the equations, inequalities, and applications posttest again.

## **Unit 9-Graphs of Linear Equations**

The system of coordinates that Descartes invented is used in many modern applications. For example, on any geographical map the location of a country or a city is usually given as a set of coordinates. The location of a ship at sea is determined by longitude and latitude, which is an application of the coordinate system to the curved surface of Earth. Computer graphic artists create figures and computer animation by referencing coordinates on the screen. Have you ever seen the 6% grade signs as you are driving up or down a hill? Do you walk up or down stairs in your house or at work? You use and experience slope in many ways in your everyday life or routine. In this unit you will graph linear equations. You will also learn how to identify the slope of a line from its equation and from the graph of the line.

### **Graphs of Linear Equations: Workout**

Complete the unit Workout for [graphs of linear equations](#). The Workout is intended to measure your background knowledge of the unit topic and is a tool for accelerating in MyFoundationsLab. If you score 75% or better on the Workout, you are considered competent in graphs of linear equations and you may skip all remaining activities in this topic. If you score below 75%, please move to the next activity.

### **Graphs of Linear Equations: Required Homework**

Complete the Required Homework section of the [graphs of linear equations unit](#). The exercises in this unit are intended to build your competency in the unit topic. Please work through these problems carefully to prepare for the graphs of linear equations posttest and the BAC1 assessment. Please keep in mind that the resource buttons on the right side of the unit activity screen will help you better understand the material through study tools, sample problems, and solutions. You must score 75% or better on the Required Homework exercises to move on to the next activity.

### **Graphs of Linear Equations: Posttest**

Take the posttest for the [graphs of linear equations unit](#). If you score 75% or better, you are considered competent in this topic, and you may skip all remaining steps in this process. If you score below 75%, please move to the next activity.

### **Graphs of Linear Equations: Study Plan**

The exercises are customized by MyFoundationsLab to build competency in your weakest areas as determined by your performance on the graphs of linear



equations posttest. MyFoundationsLab marks the exercises you should review with a pencil icon. Work through problems marked with a pencil icon in the study plan for the [graphs of linear equations unit](#). Once you have completed these exercises, go back and take the graphs of linear equations posttest again.

## **Final Steps**

Congratulations on completing the activities in this course of study! This section will guide you through the assessment process.

### **Assessment Information**

The activities in this course of study have prepared you to complete the BAC1 objective assessment. If you have not already completed the assessment, you will do so now.

#### **Accessing Pre-Assessments**

Complete the following pre-assessment:

- PBAC

For directions on how to receive access to pre-assessments, see the "[Accessing Pre-Assessments](#)" page.

The pre-assessment is comprised of 56 multiple choice and matching questions. You will be given 3 hours to complete the pre-assessment.

It is important that you abide by the following guidelines while taking the pre-assessment:

- Make sure you are well rested and have 3 hours available to devote your full attention to the pre-assessment.
- Make sure you have secured a quiet location to take the pre-assessment so distractions are held to a minimum.
- Use only a pencil/pen, clean scratch paper, clean graph paper, and a permitted calculator. You may also use a protractor, ruler, and/or compass if desired.
- Do not use your study notes, course textbook, tutors, or any other resource.

Carefully review your PBAC pre-assessment coaching report with your mentor to determine which course of study topics you should review before scheduling the final BAC1 objective assessment.

#### **Accessing Objective Assessments**

Complete the following objective assessment:

- BAC1



For directions on how to receive access to objective assessments, see the "[Accessing Objective Assessments](#)" page.

The BAC1 objective assessment is comprised of 56 multiple choice and matching questions. You will be given 3 hours to complete the assessment. The minimum passing score for the BAC1 objective assessment is 64%.

*Note: Please review the [WGU Calculator and Scratch Paper policy](#) prior to sitting for the BAC1 objective assessment so that you are familiar with permitted and prohibited calculators as well as the guidelines for using scratch paper during your assessment.*

## **Feedback**

To provide feedback for this course of study, please use the [EWB/Foundations Course of Study Feedback form](#).

## **ADA Requirements**

Please review the [University ADA policy](#).