Quantitative Literacy and Quantitative Reasoning and Communication
Course of Study for QLO1 and MQTA

Description
This course of study outlines the learning activities that will prepare you to demonstrate competence in the subject areas of Quantitative Literacy (QLO1) and Quantitative Reasoning and Communication (MQTA), including college algebra, measurement, geometry, statistics, probability, and problem solving. This course of study may take up to twelve weeks to complete, depending on your educational background, work experience, and the time you are able to dedicate to your studies. Consult with your mentor if you wish to accelerate your progress through this course of study.

Introduction
Welcome to the Quantitative Literacy domain in the Liberal Arts program. This domain is designed to give you a better understanding of the mathematical reasons for how the world functions. If at any time you require additional assistance or have any questions during your progress through this course of study, please feel free to contact the course mentors listed below.

Course Mentor ..................... Jonathan Martin
E-mail ................................ jonathan.martin@wgu.edu
Telephone ............................. 1-866-895-9660, x5508
Office Hours .........................
    Monday, 9:00 am – 9:00 pm, Mountain Time
    Tuesday, 1:00 pm – 9:00 pm, Mountain Time
    Wednesday, 6:00 am – 10:00 am, Mountain Time
    Thursday, 2:00 pm – 9:00 pm, Mountain Time
    Friday, 6:00 am – 3:00 pm, Mountain Time

Overview
Throughout this course of study, you will be completing activities designed to help you work through areas from basic algebra to geometry and trigonometry, and eventually through probability and statistics. This may all seem very daunting in the beginning, but remember that math starts with the fundamentals and everything else builds from there. For a more detailed explanation of the concepts you will be competent in, please see the list of competencies covered below.

Did you know that mathematicians do not enjoy simply performing calculations with numbers all day? For that reason, much of what you learn in math is developed through patterns to make working with numbers easier. Finding patterns and using them every day can make your life more interesting. Through mathematics you will develop quantitative literacy that will enable your critical thinking abilities in all areas of thought. Hence, you will become more effective and efficient in decision making and accomplishing your goals.
In math competencies, most of the formulas can be broken down to addition, subtraction, multiplication, and division. These four basic operations are integrally involved to establish, integrate, and understand more complicated algorithms. In order to make sense of formulas you will continually go back to these four familiar basic functions. You will gain satisfaction by mastering the material and being able to apply it in meaningful ways.

The following competencies are covered in this course of study:

**Competency 206.1.1: Applying Basic Numeracy and Calculation Skills**
The graduate possesses and understands how to apply basic numeracy and calculation skills and algorithms in arithmetic and in basic algebra.

**Competency 206.2.1: Solving Algebraic Equations**
The graduate solves algebraic equations and constructs equations to solve real-world problems.

**Competency 206.2.2: Understanding Functions**
The graduate understands the basic properties of functions.

**Competency 206.3.1: Applying Geometric, Trigonometric, and Measurement Processes**
The graduate applies basic geometric, trigonometric, and measurement skills and processes to problems in mathematics as well as in a variety of disciplines.

**Competency 206.4.1: Understanding and Using Probability and Statistics**
The graduate understands and uses elementary probability and statistics, and knows the relationship between them and sampling and inference.

**Competency 206.5.1: Constructing Arguments and Reasoning**
The graduate constructs reasonable quantitative arguments, reasons deductively and inductively, solves quantitative problems using a variety of techniques, and determines whether a given argument has logical flaws.

**Competency 206.6.1: Interpreting and Communicating Quantitative Information**
The graduate interprets documents and materials containing quantitative information and effectively communicates mathematical arguments and quantitative results.

**Competency 206.7.1: Applying Technology to Quantitative Problems**
The graduate solves problems involving computation, graphical information, and informational technology in a wide range of areas using regular and graphing calculators, databases, and statistical analysis programs.

**Learning Resources**
There are three learning resources required for the Quantitative Literacy Course of Study. All are available through MyMathLab/CourseCompass (MML). Each of these resources includes an e-text, interactive learning tools, and learning checks.

Part I, MyMathLab: Algebra for College Students. This online course includes an electronic version of the following text:

Part II, MyMathLab: Developmental Mathematics. This online course includes an electronic version of the following text:


Part III, Statistics: The Art and Science of Learning From Data. This online course includes an electronic version of the text:


Assessments URL: Math and Science Assessment Calculator Policy
http://wgu.educommons.net/liberal-arts/quantitative-literacy/CalculatorPolicy.pdf

For Quantitative Literacy: College Algebra, Measurement, and Geometry (QLO1), your competence will be assessed through an objective assessment. You will have 3 hours and 30 minutes to complete 49 objective items. A passing score is 51%. It is recommended that you bring a calculator to the site. Click the above link for the calculator policy.

The QLO1 assessment covers the following topics:

- Sequences
- Manipulating real numbers
- Percents, ratios, and proportions
- Logarithms and exponents
- Algebra and solving equations
- Algebraic equations and expressions
- Functions and graphing
- Unit conversion concepts
- Geometry and trigonometry
- Geometric figures and measures
- Probability and statistics
- Measures of central tendency
- Statistical data, experiments, and studies
- Combinations and permutations
- Quantitative problem solving
- Problem solving techniques

For Quantitative Reasoning and Communication (MQTA), your competence will be assessed through 13 performance tasks, which will be submitted through TaskStream. The Quantitative Reasoning and Communication (MQTA) assessment covers the following topics:

- Numeracy and calculation skills
- Solving algebraic equations
- Understanding functions
- Geometry and measurement
Probability and statistics
Quantitative problem solving
Quantitative communication
Quantitative technology skills

Week 1
Preparing for Success
You will be introduced to the learning resources needed to be successful in this course of study. Below you will find instructions on ordering and accessing the resources available to you.

The Learning Resources
The following activities will guide you through acquiring and accessing the learning resources required for this area of study.

☐ Acquiring Your Learning Resources and Textbooks
The learning resources for this area of study contain an e-text version of the textbook and interactive learning modules. To use these resources, you must enroll in them through your AAP. They can be found under the “Learning Resources” tab for the QLO1 and MQTA assessments. Here is the three-step enrollment process:

1. Once you click on the “View of the Learning Resources” tab, you will see a window with the following resources:
   - Part I MML: Algebra for College Students
   - Part II MML: Developmental Math
   - Part III: Statistics
2. You will want to click on “Enroll Now” for all three resources. Then you will want to make sure the window states “Pending Enrollment.” Once your mentor sees the pending enrollment, your mentor will be able to approve it.
3. You will receive three e-mails from Pearson, which will have detailed instructions on how to register for the resources. Then you may begin.

☐ MyMathLab (MML) Orientation
Accessing the E-text
You will need to go into one of the MML courses. On the left menu bar is a button titled “E-text.” Click this button, and then click into any of the chapters. From there you can click into the chapter opener or any section on the list. A new window will pop up, and then you should see a page number on the top of the page. In order to search for terms, go into the index by typing “IND” into the box with the page number. A search box will pop up, and you will be able to type in any key words you want to look up. Once in the online course, complete the following four-step process for each of the modules:
1. Take the module workout. If you score 80% or better, you are considered competent in this area and you may skip to step 3. If you score below 80%, you will need to go to step 2.

2. This is required homework that you must complete before taking the posttest. You will be able to look at the e-text, sample problems, and lessons to understand the material better. You will need to score 80% or better in order to take the posttest.

3. Take the posttest and move on to the next module if you score at least 80%. If you score below 80%, you should go to step 4 and complete your optional homework before attempting the posttest again.

4. You will also be assigned optional customized homework based on your scores.

**Tips for MML**

- Go to your required homework and click on one of the problems. A new window will open and give the problem.

*Note: On the right side are several buttons labeled “Help Me Solve This,” “View an Example,” “Textbook Pages,” and “Print.” All of these buttons, except for “Print,” will help you understand the problem.*

- In MML, you will see that on the left menu bar is a “MultiMedia Library” button. Click into this area and choose “Select All” for the media type. You will see a list of videos, animations, PowerPoint presentations, and podcasts. They will be titled and divided into sections from each chapter of the MML book you are working in. This feature is available in all three MML books. You may choose any topic you would like. For example, there is a video on “Graphing the Equation of a Line.” So, the titles are the way to find the topic you need to review.

☐ ☐ **Student Self-Assessment**

The self-assessment form is available to measure your level of competency in the Quantitative Literacy (QLO1) domain before you start your work. This will help you determine areas to concentrate on as you work through the learning resources. You will find the Quantitative Literacy (QLO1) student self-assessment form on your AAP under the “Learning Resources” tab for QLO1.

After you complete the modules in MyMathLab/CourseCompass, you will take a preassessment prior to taking the QLO1 objective assessment. The preassessment will be explained in more detail during Week 9.

After you complete the modules in MML, you will take a preassessment prior to taking the QLO1 objective assessment. The preassessment will be explained in more detail during Week 9. Depending on how you scored on the self-assessment, you may be able to take the preassessment sooner. This should only be done in consultation with your mentor.
Creating a Study Notebook

You will find it helpful to create a notebook for your notes and study materials. As you progress through this course of study, you will encounter many activities that refer to completing vocabulary and taking notes in your study notebook.

Numeracy and Calculation Skills

Through the activities that follow, you will develop an understanding of sequences, manipulating real numbers, logarithms, exponents, algebraic calculations, ratios and proportions, percents, solving equations, and problem solving techniques.

Competency 206.1.1: Applying Basic Numeracy and Calculation Skills

The graduate possesses and understands how to apply basic numeracy and calculation skills and algorithms in arithmetic and in basic algebra.

Sequences

Do you know how to calculate sequences? Through the following activity, you will investigate the patterns and see how simple addition or multiplication will help you to calculate sequences. Remember that math starts from the basics and builds from there.

Vocabulary Notebook: Sequences

Use the index in the e-text Algebra for College Students. In your study notebook, create a glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:

- Geometric sequences
- Arithmetic sequences

Manipulate Real Numbers

Do you know how to calculate numbers in the real number system? Through the following activity, you will investigate the properties and basics of real numbers. Once you see how the calculations are done with everyday positive numbers, you will be able to easily transfer these operations to fractions and signed numbers. Learning to calculate real numbers will help you become more proficient with your everyday math.

As you investigate the properties and basics of real numbers, you will learn to manipulate numbers in the real number system.

Vocabulary Notebook: Real Numbers

URL: Mathwords
http://www.mathwords.com

Use the index in the e-text Algebra for College Students. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:
• Order of operations—parentheses (all grouping symbols), exponents, multiplication, division, addition, and subtraction (PEMDAS)
• Natural, rational, and integer number systems
• Real number system
• Round
• Prime and composite
• Exponents
• Scientific notation
• Opposites and reciprocals
• Absolute value

For additional reference, please review the Mathwords site, a good resource for definitions and examples, at the above link.

**Logarithms and Exponents**

Did you know that multiplication is a shortcut for addition, and division is a shortcut for subtraction? Similarly, logs offer an easy way to multiply and divide numbers by using exponents. You will investigate the properties of exponents and basic logarithms. Remember, this all goes back to basic addition and subtraction.

**Information on Logarithms**

URL: Logarithms: Introduction to “The Relationship”
http://www.purplemath.com/modules/logs.htm

Purplemath will help you learn about log laws and calculating logs.

**Percents, Ratios, and Proportions**

Do you know how to compute percents, ratios, and proportions? Starting with familiar ratios and percentages, you will figure out more difficult ones seamlessly. You will also investigate the relevant uses for these topics, and you will learn to make good business and consumer choices. As you investigate percents, ratios, and proportion, you will develop an understanding of proportional reasoning.

**Vocabulary Notebook: Percents, Ratios, and Proportions**

Use the index in the e-text *Algebra for College Students*. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:

• Rate
• Proportion
• Scale factor
• Percents
• Ratio
**MML Module 3**

Go to MML and select “Part I MyMathLab: Algebra for College Students.” Once in the online course, go to module 3 (“Numeracy and Calculation Skills”) and complete the following steps:

1. Take the module 3 workout. If you score 80% or better, you are considered competent in this area, and you may skip step 2. If you score below 80%, you will need to go to step 2.
2. This is required homework that you must complete before taking the posttest. You will be able to look at the e-text, sample problems, and lessons to understand the material better. You will need to score 80% or better in order to take the posttest.
3. Take the posttest and move on to module 4 if you score at least 80%. If you score below 80%, you should go to step 4 and complete your optional homework before attempting the posttest again.
4. You will be assigned optional customized homework based on your scores.

**Week 2**

**Algebra, Part I**

Through the activities that follow, you will develop an understanding of algebra, solving equations, functions, and graphing.

**Competency 206.2.1: Solving Algebraic Equations**

The graduate solves algebraic equations and constructs equations to solve real-world problems.

**Algebraic Equations and Expressions**

Do you know how to develop algebraic equations and expressions from word problems? Through the following activities, you will investigate the patterns and learn how simple the transfer is from word problems to algebra. Algebra should make sense, and you will be able to break it down so it definitely does. As you work through the vocabulary and website, you will learn how to graph a linear equation. You will also be able to represent words with algebraic equations and expressions.

**Vocabulary Notebook: Equations and Expressions**

Use the index in the e-text *Algebra for College Students*. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:

- Variable
- Quotient
- Sum
- Difference
- Radical
- Graphing
- Appropriate scale
- Linear equations (x and y intercepts)
- Linear equations
- Systems of linear equations

**Information on Algebraic Representation**

URL: Regents Assessment Prep Center


The Regents Prep math site will help you translate words to algebraic symbols. You should review the lesson and then go through the practice.

**MML Module 4**

Go to MML and select “Part I MyMathLab: Algebra for College Students.” Once in the online course, go to module 4 (“Solving Algebraic Equations”) and complete the following steps:

1. Take the module 4 workout. If you score 80% or better, you are considered competent in this area, and you may skip step 2. If you score below 80%, you will need to go to step 2.
2. This is required homework that you must complete before taking the posttest. You will be able to look at the e-text, sample problems, and lessons to understand the material better. You will need to score 80% or better in order to take the posttest.
3. Take the posttest and move on to module 5 if you score at least 80%. If you score below 80%, you should go to step 4 and complete your optional homework before attempting the posttest again.
4. You will be assigned optional customized homework based on your scores.

**Algebra and Solving Equations**

Do you know how to solve and graph algebraic equations? Through the following activity, you will use simple multiplication/division/addition/subtraction with real numbers to understand the way algebra works. Then the transfer to variables will become meaningful. Algebra works for all real numbers, and it will enhance your critical thinking. As you work through module 4 in MML, you will learn how to solve equations and some basics in algebra.

**Vocabulary Notebook: Solving Equations**

Use the index in the e-text *Algebra for College Students*. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:

- Graphing
- Appropriate scale
- Quadratic equations (vertex, solutions, and all intercepts)
- Quadratic formula, factoring, and completing the square
Week 3

Functions, Part I

Through the activities that follow, you will develop an understanding of functions and graphing.

Competency 206.2.2: Understanding Functions
The graduate understands the basic properties of functions.

Functions and Graphing
Do you know how to solve and simplify functions? Through the following activities, you will investigate the patterns of functions and learn how to solve them. Functions are used in physical science, engineering, and other applied fields. Illustrations of simple functions will help you realize the meaning of functions and also how easily functions are solved.

As you work through the vocabulary and module 5 in MML, you will understand how to solve, manipulate, and graph functions from integrated problems.

☐ Vocabulary Notebook: Functions and Graphing
Use the index in the e-text *Algebra for College Students*. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:
- Basic properties of functions
- Range
- Domain
- Domain restrictions
- Inverse functions
- Rational functions

☐ MML Module 5
Go to MML and select “Part I MyMathLab: Algebra for College Students.” Once in the online course, go to module 5 (“Understanding Functions”) and complete the following steps:

1. Take the module 5 workout. If you score 80% or better, you are considered competent in this area, and you may skip step 2. If you score below 80%, you will need to go to step 2.
2. This is required homework that you must complete before taking the posttest. You will be able to look at the e-text, sample problems, and lessons to understand the material better. You will need to score 80% or better in order to take the posttest.
3. Take the posttest and move on to module 6 if you score at least 80%. If you score below 80%, you should go to step 4 and complete your optional homework before attempting the posttest again.
4. You will be assigned optional customized homework based on your scores.
Week 4

Geometry and Measurement

Through the activities that follow, you will develop an understanding of functions, graphing, geometry, trigonometry, unit concepts and conversion, percents, ratios, proportions, geometric figures, and measures.

Competency 206.3.1: Applying Geometric, Trigonometric, and Measurement Processes
The graduate applies basic geometric, trigonometric, and measurement skills and processes to problems in mathematics as well as in a variety of disciplines.

Unit Conversion Concepts
Do you know how to convert units? Through the following activity, you will investigate the patterns of convert units and see how simple the transfer is from one unit to another. The unit conversion will be across the metric and standard U.S. system. Simple, basic steps will help you gain an understanding to help you convert any units. This is helpful in everyday life, and relevant examples will be offered in the activity that follows. As you work through the vocabulary, you will learn metric and standard conversion rates.

☐ Vocabulary Notebook: Unit Conversion
Use the index in the e-text Developmental Mathematics. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:
- Metric conversion units
- Prefixes: kilo, hecto, deca, m/l/g, deci, centi, and milli
- Uses: meters (length), liters (capacity/liquid), and grams (mass and weight)
- Standard U.S. conversion units:
  - Miles, feet, yards, and inches (length)
  - Gallons, quarts, pints, and cups (capacity/liquid)
  - Tons, pounds, and ounces (mass and weight)

Geometry and Trigonometry
Do you know how to use trigonometry to find the measure of a side of a right triangle? Through the following activity, you will investigate the patterns of trigonometry and learn how and why it works. You will be able to use a scientific calculator to find the height of a building without measuring it. Remember, this works for any right triangle, so the applications are unlimited.

As you work through the vocabulary and the Internet site, you will understand how to solve basic trigonometric problems.

☐ Information and Practice on Trigonometry
URL: Regents assessment Prep Center
Review this link for help with sine, cosine, and tangent and for practice exercises. Use the link above to record your findings in your study notebook. You should continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:

- Trigonometric functions
- Sine
- Cosine
- Tangent

Geometric Figures and Measures
Do you know how to find the perimeter, area, surface area, and volume of figures? Through the following activities, you will investigate the properties of figures and the difference between perimeter, square, and cubic units. You will be able to use simple multiplication and addition to calculate perimeter and square and cubic units of figures. Remember to follow the activities so you will be able to make calculations with your understanding instead of using formulas. As you work through the vocabulary and module 6, in MML you will learn about geometrical figures and measures.

☐ Vocabulary Notebook: Geometric Figures and Measures
URL: Mathwords
http://www.mathwords.com/

Use the index in the e-text Developmental Mathematics. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:

- Triangle, trapezoid, square, and rectangle
- Cube, prism, cone, and cylinder
- Angles: acute, obtuse, right, vertical, and exterior
- Supplementary and complementary angles
- Congruence and similarity
- Perimeter and circumference
- Area and surface area
- Volume

For additional reference, please review the MathWords link above, which is a good resource for definitions and examples.

☐ MML Module 6
Go to MML and select “Part II MyMathLab: Developmental Mathematics.” Once in the online course, go to module 6 (“Geometry and Measurement”) and complete the following steps:

1. Take the module 6 workout. If you score 80% or better, you are considered competent in this area, and you may skip step 2. If you score below 80%, you will need to go to step 2.
2. This is required homework that you must complete before taking the posttest. You will be able to look at the e-text, sample problems, and lessons to understand the material better. You will need to score 80% or better in order to take the posttest.

3. Take the posttest and move on to module 7 if you score at least 80%. If you score below 80%, you should go to step 4 and complete your optional homework before attempting the posttest again.

4. You will be assigned optional customized homework based on your scores.

Week 5
Probability and Statistics, Part I
Through the activities that follow, you will develop an understanding of statistical data, experiments, studies, probability, and inferential statistics.

Competency 206.4.1: Understanding and Using Probability and Statistics
The graduate understands and uses elementary probability and statistics, and knows the relationship between them and sampling and inference.

Measures of Central Tendency
Do you know how to calculate mean, median, mode, and range? Through the following activity, you will be able to use simple addition, division, and subtraction to do all of these calculations. The measures of central tendency are important in statistics—you hear them used in the news. You will be able to interpret these statistical measures with more meaning. As you work through the vocabulary, you will learn about measures of central tendency and interpreting results.

☐ Vocabulary Notebook: Central Tendency
Use the index in the e-texts Statistics and Algebra for College Students. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:

- Measures of central tendency
- Mean
- Median
- Mode
- Range

Probability
Do you know how to find the probability of an event occurring? Through the following activities, you will investigate the patterns of probability and see how and why it works. You will be able to calculate simple probabilities by recognizing the sample space and event. You will use basic multiplication to determine probability. Remember, probability is relevant for making smart decisions in everyday life.
□ Vocabulary Notebook: Probability
Use the index in the e-texts Statistics and Algebra for College Students. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:
- Probability
- Complementary
- Mutually exclusive
- Dependent events
- Independent events
- Binomial probability formula

□ Information and Practice on Probability
URLs: HyperStart Online: Probability
http://davidmlane.com/hyperstat/probability.html

Binomial Probability

Review the “HyperStart Online: Probability” site above and review the probability links (“Probability of A and B” and “Probability of A or B”) on the upper left side of the screen. Also complete “Exercises,” which is found in the same area.

Review the “Binomial Probability” site above and review the helpful examples for a good understanding of the binomial probability formula.

Week 6
Probability and Statistics, Part II
You will develop an understanding of statistical data, experiments, studies, probability, and inferential statistics.

Competency 206.4.1: Understanding and Using Probability and Statistics
The graduate understands and uses elementary probability and statistics, and knows the relationship between them and sampling and inference.

Statistical Data, Experiments, and Studies
Do you know how to interpret statistical graphs and data to determine if a sample is biased? After completing the following activities, you will be able to use simple addition, division, and subtraction to do all of these calculations. The measures of central tendency are important in the statistics you hear about in the news. You will be able to interpret these statistical measures with more meaning.

As you work through the vocabulary, you will learn about statistical terms and data.
Vocabulary Notebook: Statistics

URLs: Mathwords
http://www.mathwords.com/

Scatter Plot
http://www.netmba.com/statistics/plot/scatter/

Stiglitz and Welsh Glossary
www.uio.no/studier/emner/medisin/helseadm/HOKON1101/h04/Forelesningsnotater/glossary.doc

Glossary of Statistical Terms
http://www.stat.berkeley.edu/~stark/SticiGui/Text/gloss.htm

Use the index in the e-texts Statistics and Algebra for College Students. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:

- Bar, pie, and line graphs
- Pareto chart
- Histogram
- Random sampling
- Experimental study
- Population survey
- Random
- Bias
- Control (control group)
- Replication
- Association
- Causation
- Correlations
- Law of large numbers
- Confidence interval
- Standard deviation
- One-and two-tailed test
- Null hypothesis and alternative hypothesis
- Type I error
- Level of significance
- Z-score
- Critical value

For additional reference, please review the links above.
MML Module 7
Go to MML and select “Part III Statistics: The Art and Science of Learning From Data.” Once in the online course, go to module 7 (“Probability and Statistics”) and complete the following steps:
1. Take the module 7 workout. If you score 80% or better, you are considered competent in this area, and you may skip step 2. If you score below 80%, you will have to go to step 2.
2. This is required homework that you must complete before taking the posttest. You will be able to look at the e-text, sample problems, and lessons to understand the material better. You will need to score 80% or better in order to take the posttest. This is a required quiz, and you must score at least 80% before moving on to the posttest.
3. Take the posttest and move on to module 8 if you score at least 80%. If you score below 80%, you should go to step 4 and complete your optional homework before attempting the posttest again.
4. You will be assigned optional customized homework based on your scores.

Week 7
Quantitative Problem Solving, Part I
Through the activities that follow, you will develop an understanding of problem solving.

Competency 206.5.1: Constructing Arguments and Reasoning
The graduate constructs reasonable quantitative arguments, reasons deductively and inductively, solves quantitative problems using a variety of techniques, and determines whether a given argument has logical flaws.

Problem Solving Techniques
Do you know different ways of problem solving? Through the following activities, you will explore different problem solving methods. You will model simple problems to solve harder problems. Also, you will develop critical thinking skills that have an arsenal of problem solving techniques. These techniques may be utilized by you for many of the decisions you make in your life.

Vocabulary Notebook: Techniques, Part I
URL: MathStories: Word Problems Solving Strategies
http://www.mathstories.com/strategies.htm

Use the index in the e-text Developmental Mathematics. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:
- Working backwards
- Translating words to algebraic symbols
- Discount
- Estimate
- Problem solving

For additional reference, please review the above website.

☐ MML Module 8
Go to MML and select “Part II MyMathLab: Developmental Mathematics.” Once in the online course, go to module 8 (“Quantitative Problem Solving”) and complete the following steps:

1. Take the module 8 workout. If you score 80% or better, you are considered competent in this area, and you may skip step 2. If you score below 80%, you will need to go to step 2.
2. This is required homework that you must complete before taking the posttest. You will be able to look at the e-text, sample problems, and lessons to understand the material better. You will need to score 80% or better in order to take the posttest.
3. Take the posttest and move on to module 9 if you score at least 80%. If you score below 80%, you should go to step 4 and complete your optional homework before attempting the posttest again.
4. You will also be assigned optional customized homework based on your scores.

Week 8
Quantitative Communication
These activities will help you develop an understanding of communicating quantitative problem solving.

Competency 206.6.1: Interpreting and Communicating Quantitative Information
The graduate interprets documents and materials containing quantitative information and effectively communicates mathematical arguments and quantitative results.

Problem Solving Techniques
Do you know how to problem solve in different ways? Through the following activities, you will explore different problem solving methods. You will be able to model simple problems to solve harder ones. Also, you will develop critical thinking skills by having an arsenal of problem solving techniques. These techniques may be utilized to help you with many decisions you make in your life.

☐ Vocabulary Notebook: Techniques, Part II
Use the index in the e-text *Algebra for College Students*. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:

- Ratio
- Equivalent
- Proportion
• Equation

☐ MML Module 9
Go to MML and select “Part I MyMathLab: Algebra for College Students.” Once in the online course, go to Module 9 (“Algebraic Equations”) and complete the following steps:
1. Take the module 9 workout. If you score 80% or better, you are considered competent in this area, and you may skip step 2. If you score below 80%, you will need to go to step 2.
2. This is required homework that you must complete before taking the posttest. You will be able to look at the e-text, sample problems, and lessons to understand the material better. You will need to score 80% or better in order to take the posttest.
3. Take the posttest and move on to the next module if you score at least 80%. If you score below 80%, you should go to step 4 and complete your optional homework before attempting the posttest again.
4. You will be assigned optional customized homework based on your scores.

Quantitative Technology Skills
Through the activities that follow, you will learn to use appropriate technological tools for manipulating and displaying data.

Competency 206.7.1: Applying Technology to Quantitative Problems
The graduate solves problems involving computation, graphical information, and informational technology in a wide range of areas using regular and graphing calculators, databases, and statistical analysis programs.

Using Spreadsheet Software to Manipulate and Graph Data
Do you know how to use spreadsheet software to manipulate and graph data? Through the following activities, you will investigate how to use technology to interpret data. You will be able to graph and manipulate data by using spreadsheet software. These techniques may be helpful for you with your job, personal finances, and much more.

☐ Vocabulary Notebook: Spreadsheets
Use the index in the e-text Developmental Mathematics. In your study notebook, continue adding to your glossary section for quick reference. Your study notebook should include definitions and examples of the following terms:
• Spreadsheet
• Average
• Pie chart
• Percent
• Graph
Help With Technology

URLs: Basic Graphing With Excel
http://www.ncsu.edu/labwrite/res/gt/graphtut-home.html#cti

Graphing With Excel
http://www.ncsu.edu/labwrite/res/gt/gt-menu.html

The above link, “Basic Graphing With Excel,” is a tutorial for creating a line graph. The second link, “Graphing With Excel,” is a list of tutorials for Excel, so you can pick and choose what topics to review.

Week 9

Test Your Competence

The following activities will guide you through completing the preassessment (PQMC) and the assessment (QMC1) for statistics, probability, and problem solving.

The Preassessment

Now that you have done the MML modules and worked through this course of study, you are ready to take the preassessment (PAQL) for the QLO1 objective assessment.

Review of Major Points

Review sequences, manipulating real numbers, percents, ratios and proportions, logs and exponents, algebra and solving equations, algebraic equations and expressions, functions and graphing, unit conversion concepts, geometry and trigonometry, geometric figures and measures, probability and statistics, measures of central tendency, statistical data, experiments and studies, combinations and permutations, quantitative problem solving, and problem solving techniques in your notes and in the MML modules. You should also focus on these topics and activities in the course of study to help you prepare for the QLO1 assessment.

This preassessment can be taken on your computer at home or at any other convenient location. Do not use your notes or texts when taking the preassessment. This will better indicate the areas you will need to review before taking the QLO1 assessment. The preassessment takes approximately two hours to complete and consists of 48 questions. A passing score on the PAQL is 59% or better.

Take the PAQL

You can request this through your AAP. To request the PAQL:
1. Find the QLO1 on your AAP.
2. Click the “Yes” link under “Preassessment Available.”
3. Click the link for “Request to Take This Preassessment.”
4. Your mentor will need to approve this request.
Additional Review
Based on the results of your preassessment, you may need to review the material from this course of study. Consult with your mentor if you do not pass the preassessment.

The Assessment
Now that you have done the MML modules, worked through this course of study, and passed the preassessment, you are ready to take the QLO1 objective assessment.

Referring for the QLO1
Once you have obtained a satisfactory score on the preassessment, you are ready to demonstrate your competency in the Quantitative Literacy domain by taking the QLO1 objective assessment. During a call with your course mentor, you will refer and schedule your QLO1 assessment.

1. Look at your AAP.
2. Find QLO1. Click on "Assessment Referral."
3. Click the tab "Request Assessment."
4. Find your proctored site.
5. Enter the dates when you expect to be finished with the domain.
6. Your mentor will need to approve this request.

You will be setting the date for the completion of this assessment as your “drop date.” This is the date by which this assessment must be completed or you will receive a “Not Passed” on your first attempt. “Not Passed” does appear on your transcript if it is not removed during the current term. It is very important for you to continually move forward with your degree.

Week 10
Algebra, Part II
Now that you have successfully passed the QLO1 assessment, you are ready to begin the MQTA. Through the activities that follow, you will develop an understanding of algebra, solving equations, functions, and graphing.

Competency 206.2.1: Solving Algebraic Equations
The graduate solves algebraic equations and constructs equations to solve real-world problems.

Algebra and Functions Tasks
The following activities will help you complete MQTA tasks 1 and 2.

Algebra and Solving Equations
URLs: Intermediate Algebra Tutorial: Graphing Linear Equations
Basic Graphing With Excel: Creating the Initial Scatter Plot
http://www.ncsu.edu/labwrite/res/gt/graphtut-home.html#cti

You will solve linear equations in one unknown both algebraically and graphically.

Complete MQTA Task 1. Go to TaskStream and read the instructions for task 1 (206.2.1-01).

In the word problem, what are the two things that are changing or varying? You need to interpret this from the given word problem. You will need to replace the two items that can change with two different variables.

Note: This task requires you to graph two linear equations. Each equation has two variables.

Note: When graphing any equation, you must show any relevant intercepts, solutions, and vertices, and you must make sure that x and y axes are labeled and scaled appropriately. The equation must also be near the graph it represents.

At the “Intermediate Algebra Tutorial” link above, you will find some useful instructions on graphing linear equations. At the “Basic Graphing With Excel: Creating the Initial Scatter Plot” link above, you will find a tutorial for creating a line graph.

☐ Review for Task 1

Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:

- Did you construct two linear equations with x for the forearm and y for the unknown?
- Did you find the solution for the equations both algebraically and graphically?
- Did you show your work algebraically and graphically?
- Did you discuss your answer?

☐ Functions and Graphing

URLs: Graphing Quadratic Functions
http://www.purplemath.com/modules/grphquad.htm

Solving Quadratic Equations: Solving by Factoring
http://www.purplemath.com/modules/solvquad.htm
Graphing With Excel
http://www.ncsu.edu/labwrite/res/gt/gt-menu.html

Solve quadratic equations in one unknown both algebraically and graphically. Complete MQTA Task 2. Go to TaskStream and read the instructions for task 2 (206.2.1¬02).

Note: You may have to solve algebraically in order to obtain the precise solutions and the point for the vertex.

Note: When graphing any equation, you must show any relevant intercepts, solutions, and vertices, and you must make sure that the x and y axes are labeled and scaled appropriately. The equation must also be near the graph it represents.

At the “Graphing Quadratic Functions” link above, there are some useful instructions on graphing quadratic equations. At the second link above, “Solving Quadratic Equations: Solving by Factoring,” you can find lessons on factoring and links to pages on quadratic formula, completing the square, and the graphing page referenced above. The “Graphing With Excel” link above includes a list of tutorials for Excel, so you can pick and choose the topics you want help with.

☐ Review for Task 2

Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:
- Did you use both algebraic and graphing methods to solve the equations?
- Did you correctly answer quadratic equation #1?
- Did you correctly answer quadratic equation #2?
- Did you correctly answer quadratic equation #3?
- Did you identify the methods used to solve the equations?

Functions, Part II
Through the activities that follow, you will develop an understanding of functions and graphing.

Competency 206.2.2: Understanding Functions
The graduate understands the basic properties of functions.

Graphing Tasks
The following activities will help you complete MQTA tasks 3–4.
Functions and Graphing

Explain why an answer to an algebraic or numerical calculation is unreasonable.

Complete MQTA Task 3. Go to TaskStream and read the instructions for task 3 (206.2.1-04).

There are basically two different situations, so complete each one separately. On A, you will want to consider what a percentage of something means and then construct an equation that represents the situation. On B, you will want to draw a picture and then construct an equation from the picture.

Review for Task 3

Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:
- Did you explain the unreasonable answer for the bus situation?
- Did you provide a reasonable answer for the bus situation?
- Did you explain the unreasonable answer for the field situation?
- Did you provide a reasonable answer for the field situation?

Graph Basic Functions of One Variable

Complete MQTA Task 4. Go to TaskStream and read the instructions for task 4 (206.2.2-02).

Graph each function separately. You will want to determine at least three coordinates for each function to ensure an accurate graph.

Note: When graphing any equation, you must show any relevant intercepts, solutions, and vertices, and you must make sure that the x and y axes are labeled and scaled appropriately. The equation must also be near the graph it represents.

Review for Task 4

Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:
- Did you correctly graph the functions?
- Did you correctly label the graphs?
Week 11

Probability and Statistics, Part III

Through the activities that follow, you will develop an understanding of statistical data, experiments, studies, probability, and inferential statistics.

Competency 206.4.1: Understanding and Using Probability and Statistics
The graduate understands and uses elementary probability and statistics, and knows the relationship between them and sampling and inference.

Statistical Data and Correlation Tasks
The following activities will help you complete MQTA tasks 5 and 6.

☐ Statistical Data, Experiments, and Studies
You will learn about randomization, replication, comparison, and control.

**URL**: Statistical Glossary: Replication

Go into MML Part III and access the e-text via the button on the left menu bar called “E-text—Agresti Text.” Click this button and then click into any of the chapters. From there you can click into the “Chapter Opener” or any section on the list. A new window will pop up; then you should see a page number on the top of the page. In order to search for terms, reach the index by typing “IND” into the box with the page number. A search box will pop up, and you will be able to type in any key words you want to look up.

Complete MQTA Task 5. Go to TaskStream and read the instructions for task 5 (206.4.1~02). Statiscics.com, reached via the “Statistical Glossary: Replication” link above, has a good glossary to help you define the terms in this task.

☐ Review for Task 5
*Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.*

Before submitting the task, check to see if you have completed the following:
- Did you correctly identify one of the controlled variables in the experiment?
- Did you identify something the scientist was unable to control?
- Did you explain the adverse effects of not controlling this variable?
- Did you explain how replication was used in the experiment?
- Did you explain why replication is an important part of an experiment?
- Did you explain the adverse effects of not using randomization?
- Did you explain the role of comparison in experiments?
- Did you explain what was compared in this particular experiment?
Association, Causation, and Correlation

**URLs:** Scatter Plot
http://www.netmba.com/statistics/plot/scatter/

Stiglitz and Welsh Glossary
www.uio.no/studier/emner/medisin/helseadm/HOKON1101/h04/Forelesningsnotater/glossary.doc

Descriptive Measures of the Strength of a Linear Association
http://www.stat.psu.edu/online/development/stat501/04linear_assoc/05linear_assocation.html

Two Research Fallacies
http://www.socialresearchmethods.net/kb/fallacy.php

Ecological Fallacy

Complete MQTA Task 6. Go to TaskStream and read the instructions for task 6 (206.4.1-06, 08).

Define each of the terms clearly, without using the root words. For example, if you were to define the word “imagery,” you would not use the word “image” in your definition.

For part A, “lurking variable” is a related term, and there is information at the links above about how to search for terms in the e-text Statistics. Give examples of the terms, and be sure to cite any ideas that you borrow. Above are some helpful links that you may reference. In the e-text Statistics, search for the terms by typing “IND” into the box with the page number in order to reach the index. A search box will pop up and you will be able to type in any key words you want to look up.

For part C, “ecological correlation” and “fallacy” are related terms.

**Review for Task 6**

Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:

- Did you define “association”?
- Did you explain how association is identified and demonstrated?
- Did you define “causation”?
- Did you describe more than two factors that influence relationships between two variables?
- Did you explain when it is appropriate to use ecological correlation?
Did you explain what statisticians should be aware of when using ecological correlation?

**Law of Large Numbers and Sampling Techniques Tasks**

The following activities will help you complete MQTA tasks 7 and 8.

- **Probability: Law of Large Numbers**
  - **URLs**: Berkeley: Law of Large Numbers
    http://www.stat.berkeley.edu/~stark/Java/Html/lln.htm
  - Gambler’s Fallacy
    http://changingminds.org/disciplines/argument/fallacies/gamblers_fallacy.htm
  - Introductory Probability and Statistics Review
    http://hspm.sph.sc.edu/COURSES/J716/a01/stat.html

Complete MQTA Task 7. Go to TaskStream and read the instructions for task 7(206.4.1-12).

In the e-text *Statistics*, search for the terms by typing “IND” into the box with the page number in order to reach the index. A search box will pop up and you will be able to type in any key words you want to look up. You may also use the Berkeley statistics site.

Also, look up “gambler’s fallacy” at the “Gambler’s Fallacy” link above.

At the “Introductory Probability and Statistics Review” link above, you can do a simulated coin toss to get your numbers.

You can stop at different points and record the numbers and percentages. You should be able to see the law of large numbers in progress. Present the fictitious data in a table like this one:

<table>
<thead>
<tr>
<th>Trial</th>
<th>Number of tosses</th>
<th>Number of Heads (Actual)</th>
<th>Number of Heads (Expected)</th>
<th>Difference between Numerical Totals</th>
<th>Percentage of Heads (Actual)</th>
<th>Percentage of Heads (Expected)</th>
<th>Difference between Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial #1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial #2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Review for Task 7**
  - **Note**: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:
  - Did you define the law of large numbers?
  - Did you explain the law of large numbers using the coin toss example?
• Did you explain how the scenario is possible using a coin toss and fictitious data?
• Did you answer and explain the “1,000 coin tosses” question?
• Did you answer and explain the “chances of heads” question?

☐ Sampling Techniques

URL: Australian Bureau of Statistics
http://www.abs.gov.au/websitedbs/D3310116.NSF/a91a469056624a32ca256eb000026ca.7/116e0f93f17283eb4a2567ac00213517

Complete MQTA Task 8. Go to TaskStream and read the instructions for task 8 (206.4.1→14, 15).

Access the Australian Bureau of Statistics via the link above to reach helpful information on multistage sampling.

☐ Review for Task 8

Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:
• Did you explain why random samples are preferred to nonrandom samples?
• Did you describe the methods of four sampling techniques?
• Did you describe one advantage of each of the four sampling techniques?
• Did you describe one limitation of each of the four sampling techniques?
• Did you cite references (if applicable)?

Hypothesis Testing Task

The following activities will help you complete MQTA task 9.

☐ Inferential Statistics: Hypothesis Testing (Potato Chip Task)

URLs: One-or Two-Tailed Tests
http://www.une.edu.au/WebStat/unit_materials/c5_inferential_statistics/one_two_tailed.html

Stating the Null and Alternative

Statistics Glossary: Basic Definitions
http://www.stats.gla.ac.uk/steps/glossary/basic_definitions.html#param
Complete MQTA Task 9. Go to TaskStream and read the instructions for task 9 (206.4.1–17).

When stating a null and alternative hypothesis remember to include the parameter.

The formula to calculate the test statistic as a z-score is also known as a z-test. It is implemented with a sample size greater than or equal to 30.

The site at the “One-or Two-Tailed Tests” above will help determine if it is a one- or two-tailed test. The “Stating the Null and Alternative” link above is helpful in interpreting your conclusion. The site reached via the “Statistics Glossary: Basic Definitions” link above is helpful for defining the parameter for a hypothesis statement.

☐ Review for Task 9
Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:
• Did you provide a correct answer, including justification?
• Did you include both the null and alternative hypotheses, including parameters for both statements?
• Did you define “type I error”?
• Did you explain how type I error relates to the example?
• Did you define “level of significance”?
• Did you correctly identify the level of significance for the problem?
• Did you calculate the z-score and show all relevant work?
• Did you determine if the null hypothesis can be rejected based on the test statistic?
• Did you explain how this conclusion was reached by relating the results to the original question?

Week 12
Quantitative Problem Solving, Part II
Through the activities that follow, you will develop an understanding of problem solving.

Competency 206.5.1: Constructing Arguments and Reasoning
The graduate constructs reasonable quantitative arguments, reasons deductively and inductively, solves quantitative problems using a variety of techniques, and determines whether a given argument has logical flaws.

Problem Solving Tasks
The following activities will help you complete MQTA tasks 10 and 11.
Problem Solving: Quantitative Problem Solving

URL: Graphing With Excel
http://www.ncsu.edu/labwrite/res/gt/gt-menu.html

Complete MQTA Task 10. Go to TaskStream and read the instructions for task 10 (206.5.1-08).

For part B, you need to determine when the discount is the same for both companies. You may need to round to the nearest penny.

For part C, you will need to figure the exact price. Keep in mind that you may also need to round to the nearest penny.

The “Graphing With Excel” link above leads to a list of tutorials for Excel, so you can pick and choose the topics you want help with.

Review for Task 10

Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:

- Did you include a chart with more than four correct hypothetical orders?
- Did you correctly identify the $50 range that contains the answer?
- Did you explain how the table was used to determine the $50 range?
- Did you correctly determine the exact price at which Company B offers the same discount as Company A by using algebraic equations?
- Did you determine the exact price at which it becomes consistently less expensive to order from Company B?
- Did you explain your answer for the actual price?

Ratios and Proportional Reasoning

URL: Ratios and Proportions
http://www.math.com/school/subject1/lessons/S1U2L2GL.html

Complete MQTA Task 11. Go to TaskStream and read the instructions for task 11(206.6.1-01, 03, 05, 06).

The units are important to include in the ratio, in solving it, and in the explanation. The “Ratios and Proportions” link above is a review on ratios, proportions, and units.
Review for Task 11

Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:

- Did you include an explanation of the procedure for setting up a proportion problem?
- Did you write a proportion that correctly represents the problem?
- Did you correctly solve the proportion written in Part B?
- Did you explain the reasoning behind setting up the proportion?
- Did you explain the proportion and the steps necessary for solving the proportion?
- Did you explain what the answer means in terms of the original problem?

Quantitative Technology Skills

Through the activities that follow, you will learn to use appropriate technological tools for manipulating and displaying data.

Competency 206.7.1: Applying Technology to Quantitative Problems

The graduate solves problems involving computation, graphical information, and informational technology in a wide range of areas using regular and graphing calculators, databases, and statistical analysis programs.

Using Spreadsheet Software, Graphing, and Manipulating Data With Technology

The following activities will help you complete MQTA tasks 12 and 13.

Vocabulary Notebook

In your notebook continue adding to your glossary section for quick reference. Your notebook should include definitions and examples of the following terms:

- Spreadsheet
- Average
- Pie chart
- Percent
- Graph

Review the Links for Help With Technology

URLs: Illuminations: Trout Pond
http://illuminations.nctm.org/LessonDetail.aspx?ID=L476

Graphing With Excel
http://www.ncsu.edu/labwrite/res/qt/graphtut-home.html#cti
Basic Algebra and Computers

Algebra 1 Online
http://teachers.henrico.k12.va.us/math/HCPSAlgebra1/CasioWksts.html

The "Illuminations: Trout Pond" link above is a lesson from the Illuminations/NCTM site, which is an application of quantitative technology. The second link, "Graphing With Excel," has a tutorial for creating a line graph as well as a list of other tutorials for Excel, so you can pick and choose what topics to review. The “Basic Algebra and Computers” link includes a lesson using Excel as a graphing calculator, which is an application of quantitative technology. The final link, “Algebra 1 Online,” provides learning activities using the calculator for solving non-routine and multistep problems.

☐ Using Excel
URL: Graphing With Excel
http://www.ncsu.edu/labwrite/res/gt/gt-menu.html

Complete MQTA Task 12. Go to TaskStream and read the instructions for task 12 (206.7.1-02, 04, 05, 06).

The link above, “Graphing With Excel,” is a list of tutorials for Excel, so you can pick and choose the topics you want help with.

☐ Review for Task 12
Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.

Before submitting the task, check to see if you have completed the following:
- Did you include a properly labeled table showing individual student test scores?
- Did you include a correct and properly labeled table showing the number of students who received each letter grade?
- Did you correctly calculate the class average using the appropriate Excel function?
- Did you create a pie chart in Excel using the information in the table that demonstrates how many students received each letter grade?

☐ Graph Basic Functions of One Variable
URL: Graphing With Excel
http://www.ncsu.edu/labwrite/res/gt/gt-menu.html

Complete MQTA Task 13. Go to TaskStream and read the instructions for task 13 (206.7.1-07, 08, 09).
The “Graphing With Excel” link above has a list of tutorials for Excel, so you can pick and choose the topics you want help with.

☐ Review for Task 13

*Note: The following information was taken from the “Meets Standards” column of the rubric. For more detail, please check the rubric found at the bottom of each task in TaskStream.*

Before submitting the task, check to see if you have completed the following:

- Did you write a correct equation?
- Did you solve the equation using algebra?
- Did you make a labeled graph of the situation?
- Did you make the graph using Excel?
- Did you explain how the graph confirms the algebraic solution?
- Did you explain what can be concluded about the different amounts of money each person has after the fifth week?

Conclusion

Congratulations on completing the Quantitative Literacy domain in the Liberal Arts program at Western Governors University. It has been an arduous journey, but your diligence has paid off. Upon completing this domain, you possess the knowledge and skill sets to understand some of the mathematical reasoning for how the world works.

In your program, whether it is teaching, business, nursing, or information technology, you will now have a better background to interpret or teach quantitative ideas and much more. As you progress through your program, remember the information you have learned here and how it can be applied throughout the rest of your student career.

At this stage, you have completed the QLO1 objective assessment and the MQTA performance assessment. Because of your conscientious preparation through this course of study, you should have passed these on the first try. If not, please consult with your mentor about the best way to prepare for a second attempt. When you have passed these assessments, a “Pass” for QLO1 and MQTA will appear on your AAP. Congratulations!

Feedback

WGU values your input! If you have comments, concerns, or suggestions for improvement of this course, please submit your feedback using the following form:

- [Course Feedback](#)