# Course Description

This course covers standard business mathematics with work-related applications to prepare students for the quantitative courses (statistics, economics, and finance) required in their programs. Topics include basic mathematics, algebra, counting techniques, and probability. The use of a scientific calculator is required.

# Course Outcomes (CO)

* **CO1**:Demonstrate basic knowledge of number theory and mathematical application. (LO1, 2)
* **CO2**:Apply problem solving skills in business problems and mathematical scenarios. (LO1, 2)
* **CO3**: Apply percentage calculations through various mathematical and business scenarios. (LO2)
* **CO4**: Calculate basic loan concepts. (LO2)
* **CO5**: Calculate basic probability and statistics in real world application. (LO2)
* **CO6**: Construct a budget. (LO2, 3, 4)
* **CO7**: Demonstrate an understanding of investment calculations. (LO1, 2, 4)

# ASBA Program Learning Outcomes (LO)

* **LO1**: The ability to clearly and effectively prepare written business communications. (*GMLO1)*
* **LO2**: The student will display appropriate quantitative problem-solving abilities in the context of a business problem. *(GMLO4)*
* **LO3**: The student will be able to apply ethical and moral decision-making principles to business situations. *(GMLO3)*
* **LO4**: The student will be able to synthesize the course work completed as a part of the associate degree program to solve business problems. *(GMLO1, 2, 4)*

**Program Learning Outcomes (PLO)**

* **PLO1**: Express an appreciation and understanding of a variety of aesthetic, literary, cultural and ideological traditions.(ULO 2, 3)
* **PLO2**: Engage meaningfully in a community of scholarship through inquiry, research and the communication of ideas. (ULO 2, 4)
* **PLO3**: Evaluate historical, political, economic and scientific data while recognizing the interrelatedness of events and processes. (ULO 1, 2, 3, 4)
* **PLO4:** Demonstrate an understanding of the impact of technology on society. (ULO7)
* **PLO5**: Reflect upon the relationship of the Divine to the human experience. (ULO 2, 3, 4)
* **PLO6**: Examine and understand the dynamics of individual and group behavior. (ULO 2, 4)
* **PLO7**: Demonstrate an understanding of quantitative reasoning. (ULO 1, 2, 4)
* **PLO8**: Engage in constructive activities of service to the community in light of the Gospel tradition as experienced through the Mercy charism that shapes the College. (ULO 2, 3, 4)

**Student Expectations**

Students are expected to:

* Ask probing and insightful questions related to course content.
* Make meaningful and relevant connections and application to their own learning process.
* Be productive and contributing members of class discussions.

# Required Course Materials

Salzman, S.A., & Clendenen, G. (2014). *Mathematics for business.* (10th ed.)*.* Upper Saddle, NJ: Pearson Education.

# Suggested Point Values

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Assessment** | **Point Value** | **Due** |
| **Week 1** | |  |  |
|  | Participation: Learning Activities | 6 | <insert due date> |
|  | Automathography Blog | 10 | <insert due date> |
|  | Week 1 Practice Problems | 6 |  |
|  | Is Math Applicable in My Life? | 50 |  |
| **Week 2** | |  |  |
|  | Participation: Learning Activities | 6 | <insert due date> |
|  | Discussion Question 1 | 6 |  |
|  | Week 2 Practice Problems | 6 |  |
|  | Test 1 | 150 |  |
| **Week 3** | |  |  |
|  | Participation: Learning Activities | 6 | <insert due date> |
|  | Investment Blog | 6 |  |
|  | Week 3 Practice Problems | 6 |  |
|  | Budget | 100 |  |
|  | Test 2 | 150 |  |
| **Week 4** | |  |  |
|  | Participation: Learning Activities | 6 | <insert due date> |
|  | Week 4 Practice Problems | 6 |  |
|  | Test 3 | 150 |  |
| **Week 5** | |  |  |
|  | Participation: Learning Activities | 6 | <insert due date> |
|  | Discussion Question 1 | 6 |  |
|  | Week 5 Practice Problems | 6 |  |
|  | Probability Practice Problems | 6 |  |
|  | Mortgage Practice Problems | 6 |  |
|  | Written Project | 80 |  |
|  | Project Presentation | 70 |  |
|  | Test 4 | 150 |  |
| **Total Points** | | **1000** |  |

# Course Schedule

|  |  |  |
| --- | --- | --- |
| **Week** | **Start** | **End** |
| One | <insert start date> | <insert end date> |
| Two |  |  |
| Three |  |  |
| Four |  |  |
| Five |  |  |

# Weekly Learning Modules

|  |  |  |  |
| --- | --- | --- | --- |
| Week One: Problem Solving and Operations | |  | |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Examine basic math computations. | | CO1, 2, 6 | |
| * 1. Use logic skills to solve mathematical computations. | | CO1, 2, 6 | |
| ***Required Learning Resources and Activities****: Students must complete any resources activities listed in this section as selected by the instructor.* | | ***Alignment*** | ***Pages/AIE/***  ***Generic*** |
| **Read** Chapter 1 of *Mathematics for Business*. | | 1.1, 1.2, 1.3 |  |
| **Addition and Subtraction**  **View** the following videos:   * “Adding and subtracting fractions with like denominators:”   <https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fractions-topic/cc-4th-adding-subtracting-frac/v/adding-fractions-with-like-denominators>  <https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fractions-topic/cc-4th-adding-subtracting-frac/v/subtracting--fractions>   * “Adding and subtracting fractions with unlike denominators:”   <https://www.khanacademy.org/math/arithmetic/fractions/fractions-unlike-denom/v/adding-fractions-with-unlike-denominators>  <https://www.khanacademy.org/math/arithmetic/fractions/fractions-unlike-denom/v/subtracting-fractions-with-unlike-denominators>   * “Adding and subtracting mixed numbers:”   <https://www.khanacademy.org/math/arithmetic/fractions/Mixed_number_add_sub/v/adding-mixed-numbers>  <https://www.khanacademy.org/math/arithmetic/fractions/Mixed_number_add_sub/v/subtracting-mixed-numbers>  <https://www.khanacademy.org/math/arithmetic/fractions/Mixed_number_add_sub/v/subtracting-mixed-numbers-2>  **Respond** to the following question after watching the videos:   * Think about your last trip to a destination. Create a word problem that involves mixed numbers and fractions. For example, I went to Boston MA. I drove 2 1/2 hours the first day, 1 1/4 hours the next day, and 5 hours the following day. What was my total amount of time on the trip?   **Respond** to other students by answering the questions they post and provide corrections or feedback to students who answered it incorrectly. | | 1.1, 1.2 | Lecture Activity = 1.5hr |
| **Multiplication and Division with Fractions**  **View** the following videos:   * “Multiplying negative and positive fractions:” <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-fractions-decimals/cc-7th-mult-div-frac/v/multiplying-negative-and-positive-fractions> * “Conceptual understanding of dividing fractions by fractions:” <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/cc-6th-dividing-fractions/v/conceptual-understanding-of-dividing-fractions-by-fractions> * “Rounding whole numbers 1:” <https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-rounding/v/rounding-whole-numbers-1>   **Complete** the following after viewing the videos:   * You have decided to host a party for your closest friends and would need to triple the recipe for an item you plan to cook. Locate your favorite recipe that requires at least five ingredients and triple the ingredients necessary to host the party. Post the original recipe amounts and post the amounts tripled.   **Respond** to other students by providing feedback on whether the amounts were calculated correctly. If the ingredients were calculated correctly, share the difficulties encountered in calculating the recipes. If done incorrectly, explain the correct steps. | | 1.1, 1.2 | Lecture Activity = 1.5hr |
| **Fractions**  **View** the following videos:   * “Converting mixed numbers to improper fractions:” <https://www.khanacademy.org/math/arithmetic/fractions/mixed_numbers/v/converting-mixed-numbers-to-improper-fractions> * “Reduce fractions to simplest form:” <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-ratios-prop-topic/cc-6th-describing-ratios/v/ratios-as-fractions-in-simplest-form>   **Respond** to the following questions after watching the videos:   * What is one point that you learned from the video? * What is one point that you find challenging or still have questions about?   **Respond** to other students by helping to answer their questions or how you may relate to their challenges. | | 1.1 | Lecture Activity = 1hr |
| **Web Conference**  **Participate** in weekly web conferences using Adobe Connect. This session is held every << Enter day>> from <<Enter start time>> to <<Enter end time>> EST. You are required to either attend this session or watch a recording of the session.  Agenda:   1. Review the goals and objectives and assignments of the course. 2. Introduce Chapter 1 material. 3. Answer questions on the practice problems   **Click** the web conference link provided by your instructor during the designated meeting time.  **Use** these sessions to ask any questions or concerns you have in completing the weekly practice problems. If you are unable to attend the conference call, a recorded version will be available and posted by the instructor after the meeting. | | 1.1, 1.2 | Web-Conferencing = 1hr |
| ***Supplemental Learning Resources and Activities****: These resources and activities provide further exploration of content, supplemental information, and skill building. Students may complete items in this section on their own or as selected by the instructor.* | | ***Alignment*** | ***Points/AIE/***  ***Generic*** |
| **APA Guide**  **Review** the APA Guide document for an overview of the formatting. Also, look through the Gwynedd-Mercy University library for detailed information on APA formatting.  **E-mail** your instructor if you have any questions regarding APA formatting. | | N/A | Article Review = 1hr |
| ***Assignment****: Students must complete the weekly assignment(s).* | | ***Alignment*** | ***Points/AIE/***  ***Generic*** |
| **Automathography Blog**  **Post** an automathography blog in 150 to 200 words that describes you and your math background. Share any challenges and advantages you have when using math.  **Respond** to at least three other students by explaining how your backgrounds in math may or may not relate. | | 1.1 | Blog = 1hr |
| **Week 1 Practice Problems**    **Complete** the following problems in Chapter 1 of *Mathematics for Business*:   * Odd Problems 1–60 (pp. 33-34)   **Place** all answers into a single Word file showing your work. Use the Learning Resources and Activities to assist you in solving the problems as best you can.  **Submit** solutions showing your steps before the Adobe Connect conference session. Submit your answers whether you are able or unable to attend the conference.  *Note*. Answers for the odd problems are provided in the back of the book. The emphasis of this activity is to practice the steps before the test. Use this exercise to learn and practice your skills to ensure you are able to pass the test. | | 1.1, 1.2, 1.3 | Problem Solving = 1hr |
| **Is Math Applicable in My Life?**  **Write** a 350- to 700-word reflection paper that describes your ongoing relations with math.  **Address** the following in your reflection:   * How do you use math in everyday life or on the job? * What did you think of math courses that you have taken in the past? * What is the value of math? Is it important to you? * How could math improve your career or life in business?   **Format** your paper according to APA guidelines. | | 1.1 | Reflection Paper = 1hr |
| **Total** |  |  | **9 hrs** |
| **Notes** |  | | |

**Faculty Notes**

**Web Conference:** Each week you will hold a web conference to go over assignment questions, and prep students for the test. Enter the day you plan to hold the conference. It is recommended that you provide ample time for students to do the Practice Problems. Use the Adobe Connect account provided by Gwynedd-Mercy University to hold your web conferences. Through Adobe Connect, you are able to share your desktop with your students to show and explain how to work through a problem. Use the account login information provided by the university and provide a copy of the link to your students. Ask students to login as a guest and enter their names where appropriate.

Enter the conference times you are able to hold each week within the designated instruction of this document. It is recommended that you enter the same conference time each week to keep things consistent for students. Record every synchronous conference session to allow students, who cannot attend the conference, to access the lecture at a later time.

If you need training on Adobe Connect, please contact Susan Darlington.

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| Week Two: Equations and Formulas | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Solve equations using basic algebraic concepts. | | CO1, 2 | |
| * 1. Solve business related word problems using algebraic concepts. | | CO1, 2, 6 | |
| * 1. Solve problems using conversion and percentages. | | CO2, 3, 6 | |
| ***Required Learning Resources and Activities****: Students must complete any resources activities listed in this section as selected by the instructor.* | | ***Alignment*** | ***Pages/AIE/***  ***Generic*** |
| **Read** Chapter 2 of *Mathematics for Business*. | | 2.1, 2.2 |  |
| **Read** Chapter 3 of *Mathematics for Business*. | | 2.2, 2.3 |  |
| **Algebra Equations**  **View** the following videos:   * “Linear equations:”   <https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/old-school-equations/v/algebra--linear-equations-1>  <https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/old-school-equations/v/algebra--linear-equations-2>   * “Solving for a variable:” <https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/solving_for_variable/v/solving-for-a-variable> * “Variable on both sides:” <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-solving-equations/cc-8th-linear-equations/v/equations-3>   **Respond** to the following after watching the videos:   * Think about the last time you went to the grocery store and bought a bag of apples or rolls, or a box of soda etc. What is the price that you paid for the full items? Find the cost for each item.   **Respond** to other students by answering the questions they post and provide corrections or feedback to students who answered it incorrectly. | | 2.1, 2.2 | Lecture Activity = 1hr |
| **Arithmetic**  **View** the following videos:   * “Order of operations:” <https://www.khanacademy.org/test-prep/college-arithmetic/multiply-divide-brushup/v/order-of-operations>   **Post** an equation that requires you to use the order of operations (e.g. (1 + 23)2/3)  **Solve** the problem using the order of operations. Then, solve the problem NOT using the order of operations, going from left to right.  **Post** both answers, but do not show which one used the order of operations.  **Respond** to other students by trying to solve the problems and choosing the correct answer. Explain why you think that answer is correct. | | 2.1, 2.2 | Lecture Activity = 1hr |
| **Percentages**  **View** the following videos:   * “Converting decimals to percents:” <https://www.khanacademy.org/math/arithmetic/decimals/percent_tutorial/v/converting-decimals-to-percents--ex-1> * “Converting percents to decimals:” <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-ratios-prop-topic/cc-6th-percentages/v/converting-percents-to-decimals--ex-1> * “Percent word problems:”   <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-ratios-prop-topic/cc-6th-percentages/v/percent-word-problems>  <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-ratios-prop-topic/percent_word_problems/v/another-percent-word-problem>  <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-ratios-prop-topic/percent_word_problems/v/percent-word-problems-1-example-2>  **Respond** to the following after watching the videos:   * Think about daily activities that require you to solve percentage problems. Share two different examples of working through a percentage problem. Post your two examples.   **Respond** to other students’ percentage problems, discussing how their examples may or may not relate to yours and if the problems is calculated properly. | | 2.2, 2.3 | Lecture Activity = 1.5hr |
| **Web Conference**  **Participate** in weekly web conferences using Adobe Connect. This session is held every << Enter day>> from <<Enter start time>> to <<Enter end time>> EST. You are required to either attend this session or watch a recording of the session.  Agenda:   1. Introduction of Chapter 2 and Chapter 3 material. 2. Review practice problems to prepare for the test.   **Click** the web conference link provided by your instructor during the designated meeting time.  **Use** these sessions to ask any questions or concerns you have in completing the weekly practice problems. If you are unable to attend the conference call, a recorded version will be available and posted by the instructor after the meeting. | | 2.1, 2.2, 2.3 | Web-Conferencing = 1hr |
| ***Assignment****: Students must complete the weekly assignment(s).* | | ***Alignment*** | ***Points/AIE/***  ***Generic*** |
| **Discussion Question 1**  **Respond** to the following in at least 150 to 200 words:   * Generally, people use percentages more frequently than realized. How do you use percentages in your everyday life? If you are not sure where to begin, ask yourself how your life would be different if percentages were concepts unknown to civilization.   **Respond** to at least three students explaining how you may or may not relate to their findings. | | 2.3 | Discussion Board = 1hr |
| **Week 2 Practice Problems**    **Complete** the following problems in Chapter 2 and 3 of *Mathematics for Business*:   * Odd Problems 1–63 (p. 73–75) * Odd Problems 1–11; 15, 17, 19, & 25 (pp. 114–115) * All problems in Business Application Case #1 Stocks ( pp. 116-117)   **Place** all answers into a single Word file showing your work. Use the Learning Resources and Activities to assist you in solving the problems as best you can.  **Submit** solutions showing your steps before the Adobe Connect conference session. Submit your answers whether you are able or unable to attend the conference.  *Note*. Answers for the odd problems are provided in the back of the book. The emphasis of this activity is to practice the steps before the test. Use this exercise to learn and practice your skills to ensure you are able to pass the test. | | 2.1, 2.2, 2.3 | Problem Solving = 2hr |
| **Test 1**  **Review** practice problems from Week 1 to prepare for the test.  **Complete** the Test 1. | | 1.1, 1.2 | Online Test = 1.5hr |
| **Total** |  |  | **9hrs** |
| **Notes** |  | | |

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| Week Three: Investment Calculations I | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Calculate simple interest and maturity value in various business applications. | | CO3, 7 | |
| * 1. Determine the value of an investment through future and present value formulas. | | CO2, 3, 7 | |
| * 1. Evaluate the basis for the simple interest in business scenarios. | | CO2, 3, 7 | |
| ***Required Learning Resources and Activities****: Students must complete any resources activities listed in this section as selected by the instructor.* | | ***Alignment*** | ***Pages/AIE/***  ***Generic*** |
| **Read** Ch. 12 of *Mathematics for Business*. | | 3.1, 3.2, 3.3 |  |
| **Interests and Present Value**  **View** the following videos:   * “Introduction to interest:” <https://www.khanacademy.org/economics-finance-domain/core-finance/interest-tutorial/interest-basics-tutorial/v/introduction-to-interest> * “Interest (Part 2):” <https://www.khanacademy.org/economics-finance-domain/core-finance/interest-tutorial/interest-basics-tutorial/v/interest--part-2> * “Present value:”   <https://www.khanacademy.org/economics-finance-domain/core-finance/interest-tutorial/present-value/v/introduction-to-present-value>  <https://www.khanacademy.org/economics-finance-domain/core-finance/interest-tutorial/present-value/v/present-value-2>  <https://www.khanacademy.org/economics-finance-domain/core-finance/interest-tutorial/present-value/v/present-value-3>   * “Time value of money:” <https://www.khanacademy.org/economics-finance-domain/core-finance/interest-tutorial/present-value/v/time-value-of-money>   **Respond** to the following scenario after watching the videos:   * Thinking of a costly item that you or someone you know has purchased in life (such as a car). How can you apply one of the concepts from the Khan Academy videos to that scenario? Post your idea and an application of it related to one of the Khan Academy videos (show calculations of working through the concept).   **Respond** to other students by explaining how you may relate to their scenario and if the concept is appropriately applied. | | 3.1, 3.2, 3.3 | Lecture Activity = 2hr |
| **Web Conference**  **Participate** in weekly web conferences using Adobe Connect. This session is held every << Enter day>> from <<Enter start time>> to <<Enter end time>> EST. You are required to either attend this session or watch a recording of the session.  Agenda:   1. Introduction of Chapter 12 material. 2. Review practice problems to prepare for the test.   **Click** the web conference link provided by your instructor during the designated meeting time.  **Use** these sessions to ask any questions or concerns you have in completing the weekly practice problems. If you are unable to attend the conference call, a recorded version will be available and posted by the instructor after the meeting. | | 3.1, 3.2, 3.3 | Web-Conferencing = 1hr |
| ***Supplemental Learning Resources and Activities:*** *These resources and activities provide further exploration of content, supplemental information, and skill building. Students may complete items in this section on their own or as selected by the instructor.* | | ***Alignment*** | ***Points/AIE/***  ***Generic*** |
| **Project Preparation**  **Review** the Project document for an overview of the assignment due Week 5.  **Post** a summary or an outline (such as chosen topic, findings, calculations, and so on) of your progress on the Final Project. Use this discussion to post any questions you may have about the project.  **Begin** working on the project to ensure timely completion. | | 1.1, 1.2, 2.3, 3.1, 3.2, 4.1, 4.2, or 5.1 | Guided Project = 1hr |
| ***Assignment****: Students must complete the weekly assignment(s).* | | ***Alignment*** | ***Points/AIE/***  ***Generic*** |
| **Investment Blog**  **Go** to <http://www.nasdaq.com/> and enter “UGI Corporation” in the search field.  **Click** Summary Quote under the Stock Details section on the left-hand side to assist you in this activity. You may also click on other links in this column to find the answers.  **Answer** the following items:   1. What is the high and low in the past 52 weeks? 2. Using the annualized dividend if you owned 1,000 shares, what would you receive? 3. What is the high and low price for UGI shares yesterday (give exact date)? 4. What is the price at which UGI stock shares traded when the stock exchange closed yesterday (give exact date)? 5. What is a better investment, the dividend on UGI stock or the interest on a saving account at your local bank? Provide rationale and calculations to support your answer.   **Respond** to at least three other students on why you agree or disagree with their answer to question 5. | | 3.1, 3.2 | Blog = 1.5hr |
| **Week 3 Practice Problems**    **Complete** the following problems in Chapter 12 of *Mathematics for Business*:   * Odd Problems: 1–7, 11, 13, 17–27, 29–33, 35, 37, 39, 41, 43, & 47 (pp. 484–485)   **Place** all answers into a single Word file showing your work. Use the Learning Resources and Activities to assist you in solving the problems as best you can.  **Submit** solutions showing your steps before the Adobe Connect conference session. Submit your answers whether you are able or unable to attend the conference.  *Note*. Answers for the odd problems are provided in the back of the book. The emphasis of this activity is to practice the steps before the test. Use this exercise to learn and practice your skills to ensure you are able to pass the test. | | 3.1, 3.2, 3.3 | Problem Solving = 2hr |
| **Budget**  **Review** The Budget document for details of this assignment.  **Create** a budget following the criteria and submit your assignment. | | 1.1, 1.2, 2.2, 2.3 | Project = 1hr |
| **Test 2**  **Review** practice problems from Week 2 to prepare for the test.  **Complete** the Test 2. | | 2.1,2.2,2.3 | Online Test = 1hr |
| **Total** |  |  | **8.5hrs** |
| **Notes** |  | | |

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| Week Four: Investment Calculations II | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Calculate compound interest in various scenarios. | | CO1, 3, 4 | |
| * 1. Relate compound interest to personal and business applications. | | CO1, 2, 3, 4 | |
| ***Required Learning Resources and Activities****: Students must complete any resources activities listed in this section as selected by the instructor.* | | ***Alignment*** | ***Pages/AIE/***  ***Generic*** |
| **Read** Ch. 14 of *Mathematics for Business*. | | 4.1, 4.2 |  |
| **Compound Interest**  **View** the following videos:   * “Compound Interest:” <https://www.khanacademy.org/economics-finance-domain/core-finance/interest-tutorial/compound-interest-tutorial/v/introduction-to-compound-interest> * “The rule of 72 for compound interest:” <https://www.khanacademy.org/economics-finance-domain/core-finance/interest-tutorial/compound-interest-tutorial/v/the-rule-of-72-for-compound-interest> * “Formula for continuously compounding interest:” <https://www.khanacademy.org/economics-finance-domain/core-finance/interest-tutorial/cont-comp-int-and-e/v/continuously-compounding-interest-formula-e>   **Respond** to the following after watching the videos:   * Research current interest rates and interest rates from 15 years. Come up with a scenario (for example school loans, car loans, credit card debt, and so on) with compound interest and calculate the future value with the current interest rates. Then, calculate the future value with the interest rates from 15 years ago.   Why do you think interest rates are different now versus then? How is this affecting consumers?  **Respond** to other students in how you may or may not relate to their response and check the work of their calculations. | | 4.1, 4.2 | Lecture Activity = 2hrs |
| **Web Conference**  **Participate** in weekly web conferences using Adobe Connect. This session is held every << Enter day>> from <<Enter start time>> to <<Enter end time>> EST. You are required to either attend this session or watch a recording of the session.  Agenda:   1. Introduction of Chapter 14 material 2. Review practice problems to prepare for the test. 3. Ask questions regarding the Project due in Week 5   **Click** the web conference link provided by your instructor during the designated meeting time.  **Use** these sessions to ask any questions or concerns you have in completing the weekly practice problems. If you are unable to attend the conference call, a recorded version will be available and posted by the instructor after the meeting. | | 4.1, 4.2 | Web-Conferencing = 1hr |
| ***Supplemental Learning Resources and Activities:*** *These resources and activities provide further exploration of content, supplemental information, and skill building. Students may complete items in this section on their own or as selected by the instructor.* | | ***Alignment*** | ***Points/AIE/***  ***Generic*** |
| **Project Preparation**  **Review** the Project document for an overview of the assignment due Week 5.  **Post** a summary or an outline (such as chosen topic, findings, calculations, and so on) of your progress on the Final Project. Use this discussion to post any questions you may have about the project.  Keep working on the project to ensure timely completion. | | 1.1, 1.2, 2.3, 3.1, 3.2, 4.1, 4.2, or 5.1 | Guided Project = 1hr |
| ***Assignment****: Students must complete the weekly assignment(s).* | | ***Alignment*** | ***Points/AIE/***  ***Generic*** |
| **Week 4 Practice Problems**    **Complete** the following problems in Chapter 14 of *Mathematics for Business*:   * Odd Problems 1–5, 11, 13, 15, 17, 21, & 23 (p. 552–553) * 1, 11, 17, 21, & 27 (pp. 557–558)   **Place** all answers into a single word file showing your work. Use the Learning Resources and Activities to assist you in solving the problems as best you can.  **Submit** solutions showing your steps before the Adobe Connect conference session. Submit your answers whether you are able or unable to attend the conference.  *Note*. Answers for the odd problems are provided in the back of the book. The emphasis of this activity is to practice the steps before the test. Use this exercise to learn and practice your skills to ensure you are able to pass the test. | | 4.1, 4.2 | Problem Solving = 1.5hr |
| **Test 3**    **Review** practice problems from Week 3 (Chapter 12) and 4 (Chapter 14) to prepare for the test.  **Complete** the Test 3. | | 3.1, 3.2, 3.3 | Online Test = 1.5hr |
| **Total** |  |  | **7 hrs** |
| **Notes** |  | | |

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| Week Five: Loans and Mortgages | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Calculate computations involved with loans and mortgages including a loan amortization schedule. | | CO4 | |
| * 1. Calculate probability that an event may occur. | | CO5 | |
| * 1. Calculate and define the meaning of statistical computations. | | CO5 | |
| ***Required Learning Resources and Activities****: Students must complete any resources activities listed in this section as selected by the instructor.* | | ***Alignment*** | ***Pages/AIE/***  ***Generic*** |
| **Read** Chapter 4 of *Mathematics for Business*. | | 5.2, 5.3 |  |
| **Read** Chapter 16 of *Mathematics for Business*. | | 5.1, |  |
| **Probability Lecture Presentation**  **View** the lecture presentation Probability. | | 1.2, 2.2, 5.2 |  |
| **Loans, Amortization and Credit Cards Lecture Presentation**  **View** the lecture presentation on Loans, Amortization, and Credit Cards. | | 1.2, 2.2, 2.3, 5.1 |  |
| **Loans and Mortgages**  **View** the following videos:   * “Introduction to mortgage loans:” <https://www.khanacademy.org/economics-finance-domain/core-finance/housing/mortgages-tutorial/v/introduction-to-mortgage-loans> * “Amortization:” <https://www.khanacademy.org/economics-finance-domain/core-finance/stock-and-bonds/valuation-and-investing/v/amortization> | | 5.1 |  |
| **Probabilities**  **View** the following videos:   * “Basic probability:”   <https://www.khanacademy.org/math/precalculus/prob_comb/basic_prob_precalc/v/basic-probability>  <https://www.khanacademy.org/math/precalculus/prob_comb/basic_prob_precalc/v/simple-probability>  <https://www.khanacademy.org/math/precalculus/prob_comb/basic_prob_precalc/v/events-and-outcomes-1>  <https://www.khanacademy.org/math/precalculus/prob_comb/basic_prob_precalc/v/probability-1-module-examples>   * “Compound probability of independent events:” <https://www.khanacademy.org/math/probability/independent-dependent-probability/independent_events/v/compound-probability-of-independent-events> | | 1.2, 2.2, 5.2 |  |
| **Statistics and Probability**  **View** the following videos:   * “Example: Finding mean, median, and mode:” <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-probability-statistics/cc-7th-central-tendency/v/mean-median-and-mode> * “Identifying relative minimum and maximum values:” <https://www.khanacademy.org/math/calculus/derivative_applications/absolute-relative-maxima-minima/v/identifying-relative-extrema> * “Example: Range and mid-range:” <https://www.khanacademy.org/math/probability/descriptive-statistics/Box-and-whisker%20plots/v/range-and-mid-range>   **Respond** to the following question after watching the videos:   * Think about the business world, how are the statistical terms like mean, median, mode, range, and standard deviation beneficial in the real world (for example a professor can compare various students’ scores to the mean)?   **Reply** to other student responses on how you might expand further on the examples they provided. | | 5.2, 5.3 | Lecture Activity = 1hr |
| **Web Conference**  **Participate** in weekly web conferences using Adobe Connect. This session is held every << Enter day>> from <<Enter start time>> to <<Enter end time>> EST. You are required to either attend this session or watch a recording of the session.  Agenda:   1. Go over material from Chapter 4, and 16, and the lecture presentation. 2. Provide time for students to present their Project Presentation. Students presenting need to be able to share their desktop. 3. Review practice problems to prepare for the test.   **Click** the web conference link provided by your instructor during the designated meeting time.  **Use** these sessions to ask any questions or concerns you have in completing the weekly practice problems. If you are unable to attend the conference call, a recorded version will be available and posted by the instructor after the meeting. | | 5.1, 5.2, 5.3 | Web-Conferencing = 2hrs |
| ***Assignment****: Students must complete the weekly assignment(s).* | | ***Alignment*** | ***Points/AIE/***  ***Generic*** |
| **Discussion Question 1**  **Read** about various gambling games (such as craps, roulette, blackjack, poker, lottery, and so on).  **Pick** two games to research.  **Write** a probability problem for each based on your research and post that problem in the discussion.  **Answer** at least two students’ problems showing how you came to your conclusion. Respond to students that answered your post, explaining how they may or may not be correct. | | 5.2 | Discussion Board = 1hr |
| **Week 5 Practice Problems**    **Complete** the following problems in Chapter 4 and 16 of *Mathematics for Business*:    **Chapter 4:**   * Odd Problems 11–15, 21, 23, & 36 (pp. 178–181)   **Chapter 16:**   * Odd Problems 5–15 (p. 619) * Odd Problems 1–7, 9­–13, 15, & 20 (p. 628)   **Place** all answers into a single word file showing your work. Use the Learning Resources and Activities to assist you in solving the problems as best you can.  **Submit** solutions showing your steps before the Adobe Connect conference session. Submit your answers whether you are able or unable to attend the conference.  *Note*. Answers for the odd problems are provided in the back of the book. The emphasis of this activity is to practice the steps before the test. Use this exercise to learn and practice your skills to ensure you are able to pass the test. | | 5.1, 5.3 | Problem Solving = 1.5hr |
| **Probability Practice Problems**  **Complete** the Probability Practice Problems worksheet.  **Submit** your completed worksheet to the instructor. | | 1.2, 2.2, 5.2 | Problem Solving = 1hr |
| **Mortgage Practice Problems**  **Complete** the Mortgage Practice Problems worksheet.  **Submit** your completed worksheet to the instructor. | | 1.2, 2.2, 2.3, 5.1 | Problem Solving = 1hr |
| **Written Project**  **Review** the document Project for an overview of the assignment requirements.  **Submit** the written portion of the project. | | 1.1, 1.2, 2.3, 3.1, 3.2, 4.1, 4.2, or 5.1 | Final Project = 1hr |
| **Project Presentation**  **Review** the document Project for an overview of the assignment requirements.  **Post** your project presentation in the discussion board if you are unable to present your project during the web conference. You are required to do either option to get full option.  **Review** the projects of at least three other students, asking questions and providing feedback on their final work. Each student is required to comment on the presentations. Constructive positive and negative comments should be given to your fellow students. | | 1.1, 1.2, 2.3, 3.1, 3.2, 4.1, 4.2, or 5.1 | Final Project = 1hr |
| **Test 4**  **Review** practice problems from Week 5 to prepare for the test.  **Complete** the Test 4. | | 5.1, 5.2, 5.3 | Online Test = 1.5hr |
| **Total** |  |  | **11 hrs** |
| **Notes** |  | | |

**Faculty Notes**

**Web Conference:** This week, students will present their Project Presentation and they are given two options on how to present the material. They may present their project through the web conference. In this case, students may share their desktop using Adobe Connect if you change their role to be the presenter. Take note of students that are participating so they may get participation credits. Schedule 2 hours for the web conference to provide time for students to present. Another option is for students to post their presentation through the discussion board built in BlackBoard, and participation is graded as usual. Students are required to choose one of the options to present their project.

If you need training on Adobe Connect, please contact Susan Darlington.

# Breakdown of Academic Instructional Equivalencies

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|  |  |  |
| **Week 1** |  |  |
| Required |  | 8 |
| Supplemental |  | 1 |
|  |  |  |
| **Week 2** |  |  |
| Required |  | 9 |
| Supplemental |  |  |
|  |  |  |
| **Week 3** |  |  |
| Required |  | 8.5 |
| Supplemental |  | 1 |
|  |  |  |
| **Week 4** |  |  |
| Required |  | 6 |
| Supplemental |  | 1 |
|  |  |  |
| **Week5** |  |  |
| Required |  | 10.5 |
| Supplemental |  |  |
|  |  |  |
|  |  |  |
| **Total Required Hours** |  | 42 |
| **Total Supplemental Hours** |  | 3 |
| **Total Hours** |  | 45 |