GROSSMONT COLLEGE

 Official Course Outline

MATHEMATICS 078 – FOUNDATIONS FOR CALCULUS FOR BUSINESS, SOCIAL, & BEHAVIORAL SCIENCES

 1. Course Number Course Title Semester Units Semester Hours

 MATH 078 Foundations for 2 2 hours lecture: 32-36 hours

 Calculus for Business, 64-72 outside-of-class hours

 Social, & Behavior Sciences 96-108 total hours

 2. Course Prerequisites

None

Corequisite

Math 178

 Recommended Preparation

 None

 3. Catalog Description

This support course focuses on the skills and concepts needed for success in Calculus for Business, Social & Behavioral Sciences (Math 178). This course is for students concurrently enrolled in Math 178 at Grossmont College. Students will receive extra support in algebra, geometry, problem solving, technology, and study skills. This course is offered on a Pass/No Pass basis only. (Non-degree credit course)

 4. Course Objectives

 The student will:

 a. practice specific skills from algebra and geometry, and technological skills needed to complete Calculus for Business, Social & Behavioral Sciences.

 b. develop problem solving skills and gain confidence working with problems at the applied Calculus level.

 c. assess and improve their mathematical competency.

 d. develop and utilize effective study skills.

 5. Instructional Facilities

 a. Standard classroom with an abundance of writing space.

 b. Projection screen and multimedia computer station with projection capabilities.

6. Special Materials Required of Student

 Graphing Calculator.

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7. Course Content

 a. Algebra Skills

 1) Factoring

 2) Solving equations and inequalities

 3) Simplifying expressions

 4) Exponents

 5) Functions

 6) Matrices

 7) Graphing

 b. Geometry Skills

 1) Right triangles

 2) Area/perimeter/volume

 3) Rectangles

 c. Problem Solving Skills

 1) Reading strategies for comprehension

 2) Categorizing information

 3) Writing equations and translating words into equations

 4) Interpreting results

 d. Study Skills

 1) Affective domain

 2) Test taking strategies

 3) Reading a textbook for comprehension

 4) Note taking

 e. Technology Skills

 1) Graphing calculator

 2) On-line learning management Systems (on-line homework, Canvas, etc.)

 8. Method of Instruction

 a. Lecture and Demonstration

 b. Collaborative Learning and Peer Review

 c. Student Presentations

 9. Methods of Evaluating Student Performance

1. Written homework
2. Independent Exploration Activities ( Reading and reflecting on articles on affective domain)
3. Online quizzes, tests, and homework
4. Class Participation/Problem Presentations (Students will present application problems)
5. Quizzes
6. Chapter exams
7. In-Class final exam (comprehensive)

10. Outside Class Assignments

 a. Problem Sets

 c. Reading Assignments – articles on affective domain

11. Texts

1. Required Text(s):

Bittinger, Ellenbogen, Surgent.*Calculus and its Applications.* Boston, MA: Pearson, 2016.

b. Supplementary texts and workbooks: TBD

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 Addendum: Student Learning Outcomes

Upon completion of this course, our students will be able to do the following:

1. Use a problem solving process to read applied Calculus and problems and interpret the results in the context of the application.
2. Demonstrate relevant algebra, geometry, and technology skills in the context of applied Calculus.
3. Develop study habits that promote success in applied Calculus.

Date approved by the Governing Board: April 16, 2019