Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: https://catalog.uvu.edu/

Semester: Spring
Course Prefix: MGMT
Course Title: *Click here to enter text.*

Year: 2025
Course and Section #: 2240-X02
Credits: 3

Course Description

Analyzes profit, revenue, cost and average cost functions through rates of change, both average and instantaneous. Applies graphical, numerical, and algebraic techniques to optimization in business-related problems. Covers compound interest including present value and future value of ordinary annuities. Focuses on solving a variety of problems in economics and finance using derivatives and integrals. May be delivered hybrid and/or online.

Course Attributes

This course has the following attributes:
☐ General Education Requirements
☐ Global/Intercultural Graduation Requirements
☐ Writing Enriched Graduation Requirements
☒ Discipline Core Requirements in Program
☐ Elective Core Requirements in Program
☐ Open Elective
Other: *Click here to enter text.*

Instructor Information

Instructor Name: Ashlee Barker Adjunct Instructor

Student Learning Outcomes

1. Create profit, revenue and cost equations given data, related equations, or graphs.
2. Construct models of best fit from data including linear, quadratic, polynomial, and power models.
3. Calculate optimal solutions for business-related problems using algebraic, numerical, and graphical techniques.
4. Calculate simple interest, compound interest, and continuously compounded interest including present value and future value of ordinary annuities.
5. Compute marginal profit, marginal cost, and marginal revenue by using derivative functions.
6. Construct total cost and total revenue functions by using indefinite integrals and initial conditions.
7. Create the derivative function for products, quotients and compositions of polynomial, rational, and exponential functions.
8. Calculate limits including limits at infinity and infinite limits.

Course Materials and Texts

A printed textbook is not required for this course. This class will use an electronic text and electronic WebAssign content that can be accessed through the Canvas (WebAssign) web site for the course. This electronic content will be available the first day of class for all enrolled students. A $85 charge will be assessed for all students in the course. This charge will be listed as a "Canvas Course Materials/Cengage" and will be paid through tuition/fees. Students who drop the course after the drop date, may get their tuition back, but will NOT get the book fee back. The bookstore will not refund the money after the last day for 100% refund even if the student never attended class. This charge will be listed as a "Bookstore Charge" and will be paid through a process similar to that used for tuition/fees. Lab access fee of $13 for computers also applies.

Although no printed text is required, many students find a hard copy of the text very helpful. The text is Mathematical Applications for the Management, Life, and social Sciences by Ronald Harshbarger and James Reynolds. Old editions of the text are also just fine to use and are much cheaper if you desire a printed text!

Course Requirements

Course Assignments, Assessments, and Grading Policy
Course Assignments, Assessments, and Grading Policy
Grading
Homework: 10%
Quizzes: 10%
Two Check-ups: 15%
Midterm: 25%
Final Exam: 40%
A 93 – 100% C 73 – 76.99%
A- 90 – 92.99% C- 65 – 72.99%
B+ 87 – 89.99% D 50 – 64.99%
B 83 – 86.99% E 0 – 49.99%
B- 80 – 82.99%
C 77-79.99%

Required or Recommended Reading Assignments
Mathematical Applications for the Management, Life, and Social Sciences; 12th Ed., Ronald Harshbarger and James Reynolds
Chapters 1, 6, 9, 10 and 12

General Description of the Subject Matter of Each Lecture or Discussion
Generative AI
1.1 Percent
Quiz 1.1
1.2 Solving and Business Fundamentals
Quiz 1.2
1.3 Lines and Profit
Quiz - 1.3
1.4 Simple Interest

Quiz - 1.4
Excel #1 Mixture Problems
Quiz - Excel #1
2.1/2.2 Quadratics and Piecewise
Quiz - 2.1/2.2
2.3 Vertex and Maximum
Quiz - 2.3
2.5 Modeling (Excel)
Quiz - 2.5 Modeling
9.1 Limits
Quiz - 9.1
9.2 Limits at Infinity
Quiz - 9.2
Review for Check-Up #1
Check-Up #1
9.3 Average Rate of Change and Tangent
Quiz - 9.3
9.4 Part I: Basic Derivative Rules
Quiz - 9.4 Part I
9.4 Part II: Instantaneous Rates and Tangent Lines
Quiz - 9.4 Part II
9.5 Product and Quotient Rule
Quiz - 9.5
9.6 Chain Rule
Quiz - 9.6
9.8 Higher Order Derivatives
Quiz - 9.8
9.9 Applications of Derivatives
Quiz - 9.9
10.1 Increasing/Decreasing, Relative Extrema
Quiz - 10.1
Review for Midterm Exam
Midterm Exam
10.2 Concavity and Inflection
Quiz - 10.2
10.3 Optimization
Quiz - 10.3
Excel #3
10.4 Applications and Inventory Cost
Quiz - 10.4
11.5 Tax Revenue and Elasticity
Quiz - 11.5
12.1 Basic Antiderivatives
Quiz - 12.1
Review for Check-Up #2
Check-Up #2
12.2 U-substitution
Quiz - 12.2

12.4 Antiderivative Applications, Solving for C
Quiz - 12.4
6.1 Compound Interest
Quiz - 6.1
Excel #2 Amortization
Quiz - Excel #2 Amortization
6.2 Continuous Compounding and Signed Cash Flows
Quiz - 6.2
6.3 Loans
Quiz - 6.3 Loans
Review for MGMT 2240 Final Exam
MGMT 2240 Final Exam

Required Course Syllabus Statements

Generative AI
Click here to enter text.

Using Remote Testing Software
☐ This course does not use remote testing software.

☒ This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

Required University Syllabus Statements

Accommodations/Students with Disabilities
Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU [Accessibility Services](#) at [accessibilityservices@uvu.edu](#) or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at [DHHservices@uvu.edu](#)

DHH is located on the Orem Campus in BA 112.

Academic Integrity

At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their rights and responsibilities. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in UVU Policy 541: *Student Code of Conduct*.

Equity and Title IX
Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation
UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.
To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a specially dedicated space for meditation, prayer, reflection, or other forms of religious expression.