

Professor:

Email:

Office Hours:

Course Time and Place:

Office:

Phone:

Course Catalog Description

This course covers the basic mathematical and technological tools used to analyze quantitative information through an emphasis on life-skills applications and analysis of current events. Topics include the interpretation of data, computation and estimation, logical reasoning, visual representation of data, statistical reasoning, basic probability, and financial concepts. Throughout the course, quantitative literacy skills will be used to interpret topics such as current events, public policy debates, news reports, personal financial decisions, and health care issues. *Prerequisite:* Student has met the college's Quantitative Literacy Entrance Requirement.

Course Goals

This course has three primary goals:

- to strengthen and expand a student's quantitative skills
- to improve a student's confidence in using these quantitative skills
- to encourage a student to see how these skills are connected to the world and how to apply the skills in decision-making and problem-solving in a student's life and career

Topics Covered

The following topics have been chosen to prepare a student for a life filled with quantitative information and allow each student to make informed decisions based on that data. Examples of current events and life-skills applications will be discussed and analyzed, including topics in the news, political policy debates, personal financial decisions, health care issues, and the impact of historical events on current issues.

These examples will be used as a basis for introducing the following quantitative skills:

- Proficiency with numbers, quantitative values and estimation needed to draw sensible meaning from numerical data.
- Data interpretation skills necessary to accurately read and reason with information.
- Statistical interpretation skills used to support or refute claims and to understand important trends.
- Proficiency with basic financial data and tools related to making personal financial decisions.
- Probability reasoning skills, including the assessment of risk and evaluation of uncertainty.
- Critical thinking and logical reasoning skills required to understand and evaluate arguments, question assumptions, and think critically about a topic.

Each skill will be introduced by an example and the quantitative skill taught using short presentations, with an emphasis on how to analyze the issue. Learning mathematical formula for the sake of abstract knowledge has no place in this course.

Text

Bennett & Briggs, "Using and Understanding Mathematics", 4th Edition, 2008.

Grading Summary

Weekly Assignments	70%
Term Project	15%
Two Open-Book Exams	15%

Grading Scale: 100-93% A 92-90% A- 89-87% B+ 86-83% B 82-80% B-
79-77% C+ 76-73% C 72-70% C- 69-67% D+ 66-60% D 59-0% F

Weekly Assignments

The majority of the grade is based on weekly assignments and in-class work. These assignments include:

- Frequent discussions of personal stories or current events that involve quantitative topics, including issues encountered in Core and other classes.
- Group problem solving sessions where students work together to analyze examples in class.
- Homework assignments and short projects related to the application of quantitative skills.
- Periodic quizzes based on the reading assignments and topics covered in class.

Term Project

Each student will complete a term project, where quantitative skills will be applied to an issue related to the student's major, Core, or another topic of particular interest to the student. Both written and oral communication skills will be used to present the analysis of the issue.

Open-Book Exams

Two open-book exams will emphasize the application of quantitative skills to the analysis of current events and life-skills applications. Memorization and abstract use of mathematical formulae are not tested -- the exams focus on application of these tools to solve problems and discuss issues.

Tentative Schedule

Week	Selected Topics from...
1	Ch 1. Thinking Critically
2	Ch 2. Approaches to Problem Solving
3	Ch 11. Mathematics and the Arts
4	Ch 3. Numbers in the Real World
5	Continue Ch 3
6	Ch 4. Managing Your Money
7	Continue Ch 4, Exam 1
8	Ch 5. Statistical Reasoning
9	Continue Ch 5
10	Ch 12. Mathematics and Politics
11	Ch 6. Putting Statistics to Work
12	Ch 7. Probability: Living with the Odds
13	Ch 8. Exponential Astonishment
14	Term Project Presentations
15	Ch 13. Mathematics and Business