DEPAUL | School of Continuing and Professional Studies

Quantitative Reasoning
Undergraduate Course Information Guide

Course Number: LL 205, 4 credits, 10 Weeks
Delivery Formats: Online Async

Course Description

This course provides an introduction to various topics in quantitative reasoning that most adults will be exposed to throughout their university coursework, their careers, and their daily lives. You will be introduced to different approaches to problem solving, how numbers are used in the real world, how to manage your personal finances, basic concepts in statistics and how they are applied in everyday settings and, finally, how money and populations grow and decay. Using mathematical models to understand real-world phenomena and to make predictions is an important component of the course.

Learning Outcomes

After completing this course, you will be able to:

- Use units of measurement to solve problems and check answers.
- Apply a general set of guidelines and hints for effective problem solving.
- Use percentages and understand how they can be abused.
- Understand how to put very large and small numbers into perspective.
- Deal more effectively with uncertainty.
- Understand how errors can affect measured numbers.
- Critique how numbers may be deceiving.
- Understand basic probability.
- Understand the power of compound interest.

• Make informed decisions when comparing investment plans, savings plans and loan payments.

• Use various financial calculators to analyze investment plans, savings plans and loan payments.

• Understand the statistics that appear daily in newspapers, on TV and in magazine articles.

• Use Excel to manipulate, analyze and display data as pie charts, bar charts, maps and line graphs.

• Improve your critical thinking skills to more effectively interpret graphs.

• Appreciate more deeply how critical quantitative reasoning skills are to your survival to navigating a world exploding with numerical data.

Learning Strategies and Resources

Some learning activities, assignments and deadlines will vary depending on the delivery format of the course and may differ slightly from what is presented in this document.

The assignments are designed to help students effectively address and apply the course topics to familiar situations. Whether they have taken math courses recently or it has been a while since they studied these applications, there are plenty of resources available to assist all students. Scientific calculators and the Excel spreadsheet program will be used as tools for exploring algebraic and statistical concepts. Excel spreadsheets and charts are used extensively to illustrate graphically how to display, analyze and interpret data.

Required Readings

Books and learning materials are available at the DePaul bookstore, at http://depaul-loop.bncollege.com, or through alternative sources.

Pearson Custom Mathematics-Quantitative Reasoning with: My Math Lab Student Access Kit (MML SAK) ISBN: 9781323819388

This text has a supporting website that we will use extensively in this class. You must purchase the book and MML Student Access Kit to gain access to this website. You have two options to do this.

Option 1: You can purchase a new textbook which comes packaged with the MyMathLab access code. Textbook + MyMathLab purchase through the DePaul bookstore. You must purchase a book from DePaul Bookstore for this option.

Option 2: With this option you do not get a hard copy textbook. All students have access to the My Math Lab website for 3 weeks after the class starts. Students log into MML through https://mylabsplus.depaul.edu

Learning Deliverables

In addition to module quizzes and class discussions addressing the practical application of mathematical concepts, each module features a data organizing project that supports the general theme of the module and involves the manipulation of data to reach relevant conclusions.

Assessment of Student Learning

Distribution of Grade Points

Graded Assignments	Percentage of Final Grade
5 Quizzes	30%
6 Applied Projects	50%
11 Online Discussions	20%

Grading Scale

A = 95 to 100	A- = 91 to 94	B+ = 88 to 90
B = 85 to 87	B- = 81 to 84	C+ = 77 to 80
C = 73 to 76	C- = 69 to 72	D+ = 65 to 68
D = 61 to 64	F = 60 or below	INC

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Course Schedule

Week or Module Title or Theme	Readings / Learning Activities	Graded Assignments
Weeks 1 and 2, Module 1: Approaches to	Text Chapter 2	1.2 Excel Charting Project

Problem Solving	Module 1 Quiz	1.3 Introductions 1.4 Class Discussion: Discovering the numbers around us 1.5 Group Discussion: Numbers in Pictures
Weeks 3 and 4, Module 2: Numbers in the Real World	Text Chapter 3 Module 2 Quiz	2.2 The Consumer Price Index Project 2.3 Class Discussion: Poverty Level in the US in Absolute and Relative terms 2.4 Group Discussion: Income taxes: What is our "fair share"?
Weeks 5 and 6, Module 3: Statistical Reasoning	Text Chapter 5 Module 3 Quiz	3.2 The Statistical Reasoning Project 3.3 Class Discussion: Graphics in Media Class Discussion
Weeks 7 and 8, Module 4: Probability	Text Chapter 6 Module 4 Quiz	4.2 How Probability Funds State Governments Project 4.3 Class Discussion: Probability in Illinois State Gaming Discussion
Weeks 9 and 10, Module 5: Financial Management	Text Chapter 4 Module 5 Quiz	5.2 Financial Management Project 5.3 Class Discussion: Understanding the US Federal Government Budget 5.4 Group Discussion: How much money do you need to retire?

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Course Policies

For access to all SCPS and DePaul University academic policies, refer to the following links:

SCPS Student Resources Website

DePaul Student Handbook

The D2L Course Website for this course.

Course Syllabus

The official syllabus for this course that includes course dates, instructor information and quarter specific details will be provided by the course instructor by the start of the course and available on the course D2L website.

Course Registration

To find out when this course will be offered next, you can go to the SCPS Registration website for details on how to register for the course.

For information on how this course can apply to your program, contact your academic advisor.

School of Continuing and Professional Studies

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