

Note:

Course content may be changed, term to term, without notice. The information below is provided as a guide for course selection and is not binding in any form, and should not be used to purchase course materials.

COURSE SYLLABUS

MATH 115

MATHEMATICS FOR LIBERAL ARTS

COURSE DESCRIPTION

A survey course for liberal arts majors including a review of algebra and an introduction to logic, probability and statistics, mathematical structure, problem solving, number theory, geometry and consumer applications.

RATIONALE

Since Mathematics for Liberal Arts is the only college mathematics course that many students take, it is designed to dispel the common opinion that mathematics is only arithmetic or algebra. Students will accumulate a basic working knowledge of several branches of mathematics.

I. PREREQUISITES

MATH 110 or equivalent

II. REQUIRED RESOURCE PURCHASE

Click the following link to view the required resources for the term in which you are registered: <http://bookstore.mbsdirect.net/liberty.htm>

III. ADDITIONAL MATERIALS FOR LEARNING

- A. Computer with Internet access (broadband recommended)
- B. Microsoft Word
(Microsoft Office is available at a special discount to LU students.)
- C. Scientific calculator
- D. Ruler
- E. Protractor

IV. MEASURABLE LEARNING OUTCOMES

Upon successful completion of this course, the student will be able to:

- A. Utilize math strategies in problem solving.
- B. Solve algebraic equations.
- C. Apply logic to life situations.
- D. Relate Probability and Statistics elements of life.

- E. Describe how number theory and mathematical structure work.
- F. Recognize the elements inherent in geometry.
- G. Integrate math concepts into their personal life situations.

V. MATH 115 CORE COMPETENCY LEARNING OUTCOMES

- A. Solve problems (including word problems) utilizing arithmetic concepts and algebraic equations. (Mathematics)
- B. Interpret information presented in various graphs and diagrams. (Mathematics)
- C. Solve problems using insight or logical reasoning. (Mathematics)
- D. Recognize flaws and logical inconsistencies in an argument. (Critical Thinking)

VI. COURSE REQUIREMENTS AND ASSIGNMENTS

- A. Textbook readings and PowerPoint lectures

Students will complete the textbook reading for each chapter section prior to engaging in the MyMathLab exercises, quizzes, and tests. The reading sets the foundation for the ideas in each area of the course. The PowerPoint lectures help students preview/review and prepare for the four tests.

- B. Discussion Board forums (3)

At specific times, students will be asked to engage in the Discussion Board forums to communicate relevant information to the instructor and the other students pertaining to math concepts. Students must submit a thread answering the forum question by Saturday at 11:59 p.m. (ET) of the week and then reply to two other students' threads by Monday at 11:59 p.m. (ET) of the same week. A grading rubric lists the elements the instructor will use to grade threads and replies.

- C. Exercises

To develop mathematical proficiency in each area of the course, students will utilize MyMathLab to work the assigned exercise problems correlating with each section of the text. Students must score at least 80% in the exercises to be prepared to engage in the quizzes and tests associated with the mathematical concepts.

- D. Quizzes (7)

Each quiz is open-book and will contain multiple-choice and short answer questions ranging from fact recall to the application of course material. Students must take each quiz using MyMathLab by Monday at 11:59 p.m. (ET) of the pertinent modules.

E. Core Competency Quiz

This quiz is part of Liberty's Core Competency Learning program. The quiz must be taken using MyMathLab by Friday at 11:59 p.m. (ET) of Module/Week 16. The quiz covers material selected to align with Liberty's Core Competency Learning program that was covered throughout the course.

F. Reviews

There will be 4 review assignments completed throughout this course. The first 3 will be completed in preparation for Tests 1, 2 and 3 and the other review will be completed in preparation for the Final Exam. Test Reviews 1, 2 and 3 are due by 11:59 p.m. (ET) on Sunday of the assigned modules/weeks. The Final Exam Review is due by 11:59 p.m. (ET) on Friday of Module/Week 16.

G. Tests (3) and the Final Exam

Each test and the final exam are open-book and will contain multiple-choice and short answer questions ranging from fact recall to the application of course material. Each test must be taken using MyMathLab by Monday at 11:59 p.m. (ET) of the pertinent modules; the final exam must be taken using MyMathLab by Friday at 11:59 p.m. of Module/Week 16.

VII. COURSE GRADING AND POLICIES

A. Points

Discussion Board forums (3 at 20 pts ea)	60
Exercises (12 at 10 pts ea)	120
Quizzes (7 at 40 pts ea)	280
Core Competency Quiz (1 at 30 pts ea)	30
Reviews (4 at 10 pts ea)	40
Tests (3 at 100 ea)	300
Final Exam	170
Total	1000

B. Scale

A = 900–1000 B = 800–899 C = 700–799 D = 600–699 F = 0–599

C. Disability Assistance

Students with a documented disability may contact LU Online's Office of Disability Academic Support (ODAS) at LUOODAS@liberty.edu to make arrangements for academic accommodations.

COURSE SCHEDULE

MATH 115

Textbooks: Miller et al., *Mathematical Ideas* (2012).

WEEK/ MODULE	READING & STUDY	ASSIGNMENTS	POINTS
1	Miller et al.: 1.1 – 1.4 PPt: Introductory Lecture 2 online articles 1 website	Course Requirements Checklist	0
		DB Forum 1 – Intro/Math Background	20
		Exercises 1.1 – 1.4	10
		Quiz 1 (Chapter 1)	40
2	Miller et al.: 2.1 – 2.4	Exercises 2.1 – 2.4 Quiz 2 (Chapter 2)	10 40
3	Miller et al.: 3.1 – 3.2 1 document	DB Forum 2 – Logic Application Exercises 3.1 – 3.2	20 10
4	Miller et al.: 3.3 – 3.5	Exercises 3.3 – 3.5	10
5	Miller et al.: 3.6	Exercises 3.6 Quiz 3 (Chapter 3)	10 40
6	PPt: Test 1 Review	Test 1 Review Test 1	10 100
7	Miller et al.: 6.1 – 6.5; pp. 276 – 279 (Extension)	Exercises 6.1 – 6.5 Quiz 4 (Chapter 6)	10 40
8	Miller et al.: 7.1 – 7.4	Exercises 7.1 – 7.4	10
9	Miller et al.: 7.5 – 7.7	Exercises 7.5 – 7.7 Quiz 5 (Chapter 7)	10 40
10	PPt: Test 2 Review	Test 2 Review Test 2	10 100

WEEK/ MODULE	READING & STUDY	ASSIGNMENTS	POINTS
11	Miller et al.: 9.1 – 9.4	Exercises 9.1 – 9.4 Quiz 6 (Chapter 9)	10 40
12	Miller et al.: 12.1 – 12.3	Exercises 12.1 – 12.3 Quiz 7 (Chapter 12)	10 40
13	PpT: Test 3 Review	Test 3 Review Test 3	10 100
14	Miller et al.: 13.1 – 13.3	Exercises 13.1 – 13.3	10
15	Miller et al.: 13.4 – 13.5	DB Forum 3 – Personal Finance Exercises 13.4 – 13.5	20 10
16	PpT: Final Exam Review	Final Exam Review Core Competency Quiz Final Exam	10 30 170
TOTAL			1000

DB = Discussion Board

PpT = PowerPoint

NOTE: Each course week (except week 1) begins on Tuesday morning at 12:00 a.m. (ET) and ends on Monday night at 11:59 p.m. (ET). The final week ends at 11:59 p.m. (ET) on Friday.