University of Maryland University College

MATH103 Syllabus

Term	2132
Course Title	College Mathematics
Class Section	A362
Start and End Date	Mar-18-2013 to May-09-2013
Days and Times	Mo, Tu, We, Th 16:40 - 17:55
Education Center	IWAKUNI MARINE CORPS AIR STN
Faculty Member	Robert Laurie - robert.laurie@umuc.edu

Faculty Contact Information:

Telephone: 253-5117 or 253-5447 or 253-3392 or off-base (0827) 21-5117
Recitation Sessions will be Monday and Wednesday 6pm to 7pm.
Do not schedule another class during this time if you feel you will need assistance.

Course Materials:

Title: Thinking Mathematically with Student Solutions Manual & MYMATHLAB
Author: BLITZER
Edition: 5TH HBK.
Copyright: 2011
Publisher: PEARSON EDUCATION Japan
ISBN: 9781256483243 or (ISE) 9781408258316
Student Comment: Package contains either Text (ISBN: (9780321645852) -OR- International Edition Text (ISBN: 9780321692351) and Student Solutions Manual (ISBN: 9780321646378) and MyMathLab Student Access Card (ISBN: 9780321262523).

For textbooks, visit the webText nearest your location:
webText Asia https://webtext.asia.umuc.edu.
webText Europe https://webtext.europe.umuc.edu.

Course Description:

Prerequisite: MATH 012 or approval of the department. This course is not intended for students planning to take MATH 107 or higher-numbered mathematics courses and does not serve as a prerequisite for these courses. This course focuses on data driven applications and the development of critical thinking skills related to mathematics. Topics include problem solving, equations, inequalities, linear systems, graphs, functions, consumer mathematics, financial management, probability and statistics. Additional topics may include set theory, Venn Diagrams, deductive and inductive reasoning, and logic.

Course Outcomes:

After completing this course, you should be able to

1. perform and execute basic arithmetic operations and simplify expressions involving exponents and square roots

2. demonstrate mastery of algebraic skills

3. recognize and apply mathematical concepts to real-world situations

4. efficiently use relevant technology

5. demonstrate understanding of the concepts of functions and related applications

6. identify and solve problems in finance

7. demonstrate proficiency in basic concepts and procedures related to descriptive statistics

8. calculate probabilities, and use and apply the normal distribution

Course Introduction:

College Mathematics is designed to show you how mathematics can be applied to your life in interesting, enjoyable, and meaningful ways. This course focuses on problem-solving and critical thinking strategies that offer you the skill-building and practice essential at this level. This course integrates the applications and the technology you need to develop an appreciation of mathematics through your college career and beyond.

Grading Information and Criteria:

There will be three one hour exams each worth 1/6 (16.67%) of the final grade and a comprehensive final exam that is worth 1/3 (33.33%) of the final grade. The remaining 1/6 (16.67%) of grade will be for attendance and homework assignments which will be collected at the beginning of each exam.

Assessment Activity	Points	Percentage of Grade
Test 1	100	16.67% or 1/6
Test 2	100	16.67% or 1/6
Test 3	100	16.67% or 1/6
Homework/Attendance	100	16.67% or 1/6
Final Exam	200	33.33% or 1/3
TOTAL	600	100.00% or 1/1

Final grades are determined by total percentage:

Grade	Percentage of Points
A	90.0 to 100.0%
B	80.0 to 89.9%
C	70.0% to 79.9
D	60.0 to 69.9%a
F	< 60%

Other Information:

Facilities Requiements:

1. Large Whiteboard at front of Room with eraser and markers.
2. Computer Projection System with projection screen.
3. If Smartboard used for item 2 needs to have Geogebra installed on computer.

Supporting Resources:
Supporting resources are available to ensure your success in this course. It is highly recommended that you take advantage of all of these resources:

1. MyMathLab: This online resource has been bundled with your textbook and provides you with the opportunity to:
   a. Work through unlimited tutorial exercises correlated to the exercises in the textbook.
   b. Receive a personalized study plan to diagnose areas in which you need to practice.
   c. Access a multimedia textbook with links to learning aids, such as animations and videos.
   d. Use online tools, such as a discussion board or virtual classroom, to communicate with other students to understand the material.

   To access this resource, go to http://www.mymathlab.com and use the username and password provided in your textbook bundle.
2. Recitation Sessions: In addition to the scheduled class meetings, MATH 103 will be accompanied by 2-hours of recitation session each week. During these sessions, your instructor will be available to provide you with individual support and tutoring. This service is available to you free of charge.
   Recitation sessions are scheduled immediately after class on Mondays and Wednesdays from 6pm to 7pm.
   Do not schedule anything else during this time if you feel you will need more assistance.

Strategies for Success:

Staying on Schedule
It is important to keep pace with the course schedule, assigned readings, and homework. Those
who fall behind or fail to attempt the example and homework problems may find themselves falling behind schedule and have difficulties with the material. Try to incorporate the skills and methods learned in this course in everyday life. It is the best way to learn.

Attendance:
Your tuition buys you admission to the scheduled show and there are no

second showings. Class attendance is mandatory and understanding each lesson depends on understanding the previous lesson. To understand what goes on in class you must be there. Missing class and then expecting to find out what went on from someone else does not work in Math. Mathematics is NOT a spectator sport. It takes effort, desire, determination, discipline, and time management. You may write me an email with a 4 sentence grammatically correct explanation and makeup plan for each absence or tardiness to consider it excused.

Class Discussions:
You are encouraged to participate in class discussions and to ask questions during class. Doing this will enhance your learning and success in this class. For example, if you find any problems difficult or unsolvable, ask questions concerning those problems in recitation sessions.

Reading Assignments:
It is important that you read the assigned textbook chapters prior to the class meetings. This will ensure that you come to class meetings with at least an initial understanding of the material and will give you the best chance of success.

Project Descriptions:

Tests:
A total of three one hour tests will be administered in class that will cover specific material in the textbook. The Tests are closed book and will be similar to the homework so it is important that you do all assigned homework problems. You will need to use your scientific calculator on tests and the final exam.

Final Exam:
A standardized comprehensive final exam is required in this course. This exam will include the topics and skills covered in the required readings, lectures, and class discussions. The 150 minute common final exam will be split into two parts due to our 75 minute class period. The final exam is closed-note and closed-book. A formula sheet will be provided. You will need to use your scientific calculator, pencils, and an eraser.

Homework:
Read the sectionsTopics: applied problems, ratios, proportions, solve linear equations, algebraic expressions.
before class and work through all example problems to learn problem solving methods and procedures. Attempt to do the assigned homework problems listed and bring to class. Check odd numbered problems with answers in back of textbook and detailed solution in Solutions Manual. It is important to solve the problems before reviewing the solutions. The key to success in mathematics is working problems. The more problems you work, the better you will become at working them. Practice doing the sequential steps in solving the example and assigned problems to learn the algorithms and mathematical concepts. Students do best when study sessions are between 30 to 60 minutes instead of long cram sessions. It is better to do 3 one-hour study sessions than 1 three-hour study session. Allow enough time to complete the required assignments without getting stressed. You will be given a numerical score for each homework assignment, (e.g. 0 through 10), indicating your perceived effort in amount of solving the problems. No homework will be accepted after the test is given covering that content.

Course Schedule:

Week 1: Summary and Chapter 5 Sections 5.1 through 5.6
Summarize course, examine syllabus, and describe resources.
Topics: order of operations, signed numbers, fractions, exponents, scientific notation, greatest common factor, scientific calculator arithmetic operations, least common multiple, number theory prime numbers, decimals, graphs, tables, charts.

Week 2: Chapter 6 Sections 6.1 through 6.4
Topics: applied problems, ratios, proportions, solve linear equations, algebraic expressions.

Week 3: Test 1 and Sections 6.5 and 7.1
Topics: polynomials, linear inequalities, solving quadratic equations, rectangular coordinate system and graphs.

Week 4: Chapter 7 Sections 7.2, 7.3, and 7.6
Topics: graphing linear and quadratic equations, recognizing types of functions and their graphs, definition of functions, applied probability in modeling using functions.

Week 5: Test 2 and Chapter 8 Sections 8.1 through 8.5
Topics: simple interest, annuities, compound interest, mortgages, installment loans, percent.

Week 6: Chapter 11 Sections 11.1 through 11.7
Topics: approaches to probabilities, probability rules and applied problems, counting rules, combination, and permutations.

Week 7: Test 3 and Chapter 12 and Chapter 1
Topics: frequency distributions and graphs, measures of central tendency, measures of dispersion, normal distribution, z-scores, and applications, scatter plots, correlation, and regression. Problem Solving and Critical Thinking.

Week 8: Review and Final Exam
Finish up remaining topics and Review. Final Exam will be split over last two classes.

Faculty Bio:

Mr. Laurie earned his M.S. in electrical engineering with computer engineering emphasis and B.S. in mechanical engineering from Michigan Technological University. He first joined UMUC in 1998 and has taught at Iwakuni, Sasebo, and Guam. He has also taught at Michigan Technological University, University of Guam, and Northern Marianas College at Saipan. He is a licensed professional engineer in the State of Michigan, and has held a number of professional positions in the engineering field. These include service as a manufacturing engineer in the aerospace division of Rosemount, Inc.; as an electrical engineer with AT&T Bell Laboratories; as an electrical engineer with John Deere, Inc.; and as a software engineer with Magic Edge Inc. in Mountain View, California. He has authored several publications in the areas of microcomputer state machine architecture, sequential control, and in-circuit testing.

Last updated by Robert Laurie: February 19, 2013, 4:30 am

Find this syllabus linked from the schedule at:
Asia: http://webapps.umuc.edu/soc/asia.cfm
Europe: http://webapps.umuc.edu/soc/europe.cfm