College Algebra
Fall 2010
MATH 101.56 (3 credits), Tu_Th, 04:15PM-05:30PM, LL1-02[1]

Prerequisites: High school algebra and geometry or MATH 101 Placement.

Instructor: Dr. Buchanan
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Office Hours: 1:00PM-2:00PM (M_W_F), 2:30-3:30PM (Tu_Th) or by appointment
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Course URL: http://banach.millersville.edu/~bob/math101

Textbook: *Intermediate Algebra*, 6th edition, D. Franklin Wright, Hawkes Learning Systems, Charleston, SC, USA (2011), ISBN 978-1-932628-43-2 (textbook only), ISBN 978-1-932628-48-7 (textbook and courseware).

Objectives: MATH 101 *College Algebra* provides a base of knowledge supporting further study in mathematics and statistics (particularly for *Precalculus*, *Elements of Statistics*, and *Calculus for Management*). Upon successful completion of MATH 101 students will have learned the methods and skills of basic algebra which are used in these more advanced courses. Specifically students will learn to

- simplify and manipulate algebraic expressions,
- solve equations and inequalities,
- translate word problems into the language of mathematics and mathematical symbolism,
- graph equations, inequalities, and functions, and understand the relationship between a graph and its associated equation, inequality, or function,
- use logarithms and exponential expressions.

Course Contents: If time permits other topics may be covered as well.

- Real Numbers and Solving Equations (Chap. 1)
- Linear Equations and Functions (Chap. 2)
- Systems of Linear Equations (Chap. 3)
- Exponents and Polynomials (Chap. 4)
- Rational Expressions and Rational Equations (Chap. 5)
- Roots, Radicals, and Complex Numbers (Chap. 6)
- Quadratic Equations and Quadratic Functions (Chap. 7)
- Exponential and Logarithmic Functions (Chap. 8)

Attendance: Students are expected to attend all class meetings. The face-to-face interaction permitted in the classroom provides the ideal setting for students see the course topics and to have their questions answered in real time by the instructor. Excessive absences will hinder

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[1]MU Lancaster, 42 N. Prince St., Lancaster, PA 17603

students' understanding of the course material and may result in absentees being dropped from the course roster by the Registrar's Office. Many of the graded assessments in this course will be completed on-line and thus absences from class should have little impact on their timely completion.

Homework: In addition to the course specific objectives outlined above, successful students will also acquire study habits necessary for continued success in college-level mathematics courses. One of these study habits is diligent attention to homework. Students are expected to do their homework and participate in class. Students should expect to spend a minimum of three hours outside of class on homework and review for every hour spent in class. Homework exercises help students review and reinforce concepts covered in class. The textbook exercises are arranged in generally increasing level of difficulty. Working only the low-numbered exercises will not prepare a student sufficiently for the test and final examination exercises. All assigned homework exercises must be worked until successful completion.

In addition to practice exercises from the textbook, graded homework problems will be administered on-line through the Hawkes Learning Systems software. To receive credit for an assignment you must solve the required problems (you will be granted unlimited attempts) before the deadline and upload the certificate of completion to the Hawkes website before the deadline. Since computer hardware and software problems, website availability, and network problems are often unpredictable you should start all assignments as early as possible. Every student will be allowed one, and only one, 48-hour extension to the deadline of one graded homework assignment. If you need the deadline extension, you must request it before the deadline. Requests made after the deadlines will not be granted.

Schedule: Numbers following the dates refer to the sections of the textbook to be covered on that day.

Tuesday	Thursday
08/31: Orientation	09/02: 1.4, 1.5
09/07: 1.6, 1.7	09/09: 2.1, 2.2
09/14: 2.3, 2.4	09/16: 3.1, 3.2
09/21: Review	09/23: Test 1
09/28: 4.1, 4.2	09/30: 4.3, 4.4
10/05: 4.5, 4.6	10/07: 4.7, 4.8
10/12: Fall Break	10/14: 5.1, 5.2
10/19: 5.3, 5.4	10/21: 5.5, 5.6
10/26: Review	10/28: Test 2
11/02: 6.1, 6.2	11/04: 6.3, 6.4
11/09: 6.6, 6.7	11/11: 7.1, 7.2
11/16: 7.3, 7.4	11/18: 7.5, 7.6
11/23: 8.1, 8.2	11/25: Thanksgiving
11/30: 8.3, Review	12/02: Test 3
12/07: 8.4, 8.5	12/09: 8.6, 8.7
12/14: Review	12/16: Final Examination

Tests: There will be three tests and a comprehensive final examination. The tests and the final examination will be taken on-line through the Hawkes Learning Systems website. There will

be no need to meet as a group at MU Lancaster on the nights of the tests and the final examination.

- Test 1, Thursday, September 23, 2010
- Test 2, Thursday, October 28, 2010
- Test 3, Thursday, December 2, 2010

The final exam is scheduled for Thursday, December 16, 2010. I will not "curve" test, quiz, or exam grades.

Grades: Course grade will be calculated as follows.

Tests	15% each
Homework	25%
Exam	30%

Tests and the final examination will be graded individually on a 100-point scale. Successfully completed homework assignments will each count 1 point and their total will be 25% of the course grade. I keep a record of students' test, homework, and exam scores. Students should also keep a record of graded assignments, tests, and other materials. As an example of the calculation of the numerical course grade, suppose a student's three test grades were 87, 78, and 70 (out of a maximum of 100 points on each test), the student's final examination grade was 71 (again, out of a maximum of 100), and the student successfully completed 12 out of 14 homework assignments. This student's test average is 78.3. The student's numerical course grade is then

$$(78.3)(0.45) + (12/14)(25) + (71)(0.30) \approx 78.$$

The course letter grades will be calculated as follows. I will not "curve" course grades.

90-92	A−	93-100	A		
80-82	B−	83-86	B	87-89	B+
70-72	C−	73-76	C	77-79	C+
60-62	D−	63-66	D	67-69	D+
		0-59	F		

Calculator Policy: Frequently examples, homework exercises, quizzes, and tests will make use of a graphing calculator. The Department of Mathematics recommends the TI-83/84/85/86 model calculator for students in elementary calculus. The TI-89/92 or any other calculator with symbolic or computer algebra capabilities is not permitted to be used in this course.

Course Repeat Policy: An undergraduate student may not take an undergraduate course of record more than three times. A course of record is defined as a course in which a student receives a grade of A, B, C, D, (including + and −) F, U, Z or W. The academic department offering a course may drop a student from a course if the student attempts to take a course more than three times.[2]

The last day to withdraw from a course (and receive the W grade) is November 5, 2010.

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[2]Memorandum to mathematics faculty from Dr. Charles G. Denlinger, Assistant Chair, Department of Mathematics, August 30, 2004.

Inclement Weather Policy: If we should miss a class day due to a school closing because of weather, any activities planned for that missed day will take place the next time the class meets. For example, if a test is scheduled for a day that class is canceled on account of snow, the test will be given the next time the class meets.

Cell Phones: Silence (or better yet, turn off) all cellular telephones upon entering the classroom. Leaving class to initiate or receive a telephone call will not be tolerated and students doing so will not be re-admitted to the classroom until the following class meeting. Texting or tweeting during class interferes with the learning process. Students distracted by their cell phones are not engaged in class and will find, over the course of the semester, that learning and course grade will suffer.

Final Word: Math is not a spectator sport. What you learn from this course and your final grade depend mainly on the amount of work you put forth. Daily contact with the material through homework assignments and review of notes taken during lectures is extremely important. Organizing and conducting regular study sessions with other students in this class will help you to understand the material better.

No one can guarantee you success in this course. Your responsibilities and the instructor's expectation are outlined above. There will be no second chances, "do-overs", or extra credit assignments.