Chesapeake College
MAT 113 – 201 College Algebra Syllabus
Fall, 2013

INSTRUCTOR: Patricia Lambdin e-mail: plambdin@chesapeake.edu

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Office Hours: Monday 10:00 – 11:15 a.m. in HUM 117 at Wye Mills
Tuesday & Thursday 11:30 – 12:45 p.m in HUM 117 at Wye Mills
Tuesday 5:30 – 6:30 p.m in HUM 117 at Wye Mills
If I am not available, contact me for an appointment time.

COURSE DESCRIPTION:

This course is for students not necessarily majoring in mathematics, engineering, or physical science. (However, this course may serve as a preparatory course for Pre-Calculus.) Topics included are the real number system; algebraic, exponential, logarithmic and polynomial functions; rational polynomials, systems of equations and appropriate applications. 3 credits
COURSE PREREQUISITE: Appropriate score on placement test or MAT 031/032.

TEXT/SUPPLIES:

Algebra and Trigonometry, 4/E by Judith A. Beecher, Judith A Penna, & Marvin L. Bittinger. Prentice Hall. 2012 ISBN-10: 0321693981 • ISBN-13: 9780321693983

MyMathLab is an on-line homework program and is a REQUIRED purchase. An access code for this online program can be purchased either separately or packaged with the textbook at the bookstore.
The MyMathLab Registration Tutorial can be found at:
http://tours.pearsoncmg.com/tours/cc_register_single.html

A graphing calculator (TI-83 or TI-84) is recommended, but not required. However, a scientific calculator such as a TI-30 is essential. You are responsible for understanding how to use your calculator and for making sure that it works on test days. I do not carry extra batteries!

COURSE STRUCTURE:
Lectures:

The class will meet once per week:
MAT 113-201 Tuesday from 6:30 a.m. – 9:15 p.m.

New topics will be discussed in lecture. Reading assignments are to be completed BEFORE the lecture for which they are given allowing us to move quickly from topic to topic.

In addition to lectures, the average student should spend six hours outside of class each week (two hours for every hour spent in class). Students, whose background in mathematics is below average or who normally work at a slower than average pace, will need more time in order to keep up with the course materials.

Go to http://www.chesapeake.edu and click on "Log on to Canvas
All relevant information will be available via Canvas. If you do not have access to the MAT 113 webpage in Canvas, please email me ASAP with your name and section number.

MyMathLab: Go to http://pearsonmylabandmastering.com
the course ID will be available in class and 21679 as the zip code for Wye Mills, MD :

To register, click the Student button under Register at the top right of the screen. Follow the directions given on the website.

Run the Browser Check in MML to make sure you have the appropriate plug-ins. The Browser Check is located on the bottom left hand side of the MML course page screen.
For subsequent use, click on the SIGN IN button at the top right of the webpage.
All homework assignments will be available via MyMathLab.
If you experience any technical difficulties with MyMathLab, please contact MyMathLab's Technical Support at 1-800-677-6337.

GRADING POLICY:

This course consists of all or parts of chapters 1 – 5 of the assigned textbook. Some chapters and/or sections will be skipped because the material is considered review in nature. The Course Outline lists the sections which will be presented from each of the chapters. All grades will be posted in Canvas. The numerical final course grade will be computed as indicated in the following distribution and letter grades will be assigned as follows:

Components of Final Grade	Letter Grade
MML homework…… 10%	A: 90% or more
Quizzes……..... 10%	B: 80% up to but less than 90%
Textbook Homework 10%	C: 70% up to but less than 80%
Tests ……50%	D: 60% up to but less than 70%
Final Exam 20%	F: Less than 60%

Grade Final % =

20%((final exam score/ total final points) +50%(test scores/total test points) +10%(quiz scores/total quiz points)+10%(MMLhomework scores/total homework points)+10%(textbook homework/total textbook points)

GRADING:

Homework Assignments:
Homework problems are given during the semester for the purpose of testing students' comprehension and are assigned through an online program called MyMathLab. This program allows students to receive immediate feedback upon completing a problem. It also provides students with step-by-step assistance on how to solve problems.
An access code for MyMathLab is located in your textbook. There are due dates for each assignment and they will not be adjusted. However, students may continue working on the homework assignments with a penalty placed on the incomplete assignments.

Computer down time is NOT a valid reason for tardiness on assignments. Procrastinate at your own risk!

Additionally, there will be a short written hand-in assignment from the text due at each class meeting. These will be included in the grade given for your homework. The assignment list in Canvas along with the guidelines for acceptable completion. They will be discussed in class.

Quizzes:

A number of quizzes will be given during the semester in MML. Quizzes are worth 10% of the final course grade.

Tests:

There will be 4 to 5 tests given during the course of the semester. Tests are worth 55% of the final course grade. Test dates will be announced during class at least one week in advance. NO test grade(s) will be dropped!
There are NO make-up tests! If you miss a test I will use your final exam score in place of the miss test score. If however, you miss a second test a grade of zero will be recorded. If you know ahead of time that you will be unable to be in class on a test day, you will need to take the test early. Early tests can be taken no more than two weekdays before the test is administered in class.

Final Exam:
There will be a final exam given during the last week of the semester. This final exam is worth 20% of the final course grade.
It is a required exam and IS cumulative.

Computer down time is NOT a valid reason for tardiness on assignments. Procrastinate at your own risk!

ACADEMIC HONESTY:

Cheating includes representing the ideas of anybody except yourself as your own ideas. Students are responsible for completing all quizzes, tests and the final exam without assistance (either voluntary or involuntary) from other students. As described in the Student Code of Conduct, “If based on substantial evidence, a student is deemed guilty of academic dishonesty, the College may initiate disciplinary action as follows:

1. The student may be required to repeat the assignment or the examination.
2. The student may be given a failing grade for the assignment or the examination.
3. The student may be given a failing grade for the course.
4. The student may be suspended or dismissed from the college.

ATTENDANCE:

Students are required to attend each class meeting. If you are unable to attend class, it is your responsibility to get the notes from another student and check the announcements in Canvass.
E-mail or talk to me immediately regarding any work missed.
Students who attend class sporadically often do not do well because of the nature of the course it is in the best interest of each student to be present at every class session.
Most students need guidance in understanding the procedures involved in developing a new mathematical process.
If you find yourself unable to keep up with the class, see me during office hours or make an appointment to see me outside of class time.

TRANSFERABILITY OF THIS COURSE:
Students should check with their receiving institution as to the transferability of this course as well as what letter grades will transfer successfully.

COURSE ATTEMPT LIMIT:
Effective Spring 2008, students may only attempt a course a maximum of three times. Both Audits (L) and Withdrawals (W) count as an attempt at a course.
Students may appeal to the Vice President for Academic Affairs, Dr. Kathryn Barbour in order to take the class for additional attempts.

SUPPORT SERVICES AVAILABLE:

Student Services:
Any student in this course who has a disability that may prevent him or her from fully

demonstrating his or her abilities should contact Ms. Judy Gordon in Student Services (ext. 5805). Ms. Gordon can discuss the possibility of an accommodation plan with you to insure full participation and achievement of your educational goals.
For help with or information about advising, registration, career planning, financial aid, or the many other aspects of your life as a student at Chesapeake College, consult the Student Success and Enrollment Services office at
http://www.chesapeake.edu/studentsuccess/default.asp

Academic Support Center: The Academic Support Center offers free drop in math tutoring in room 105 of the Learning Resources Center.

Student Support Services:

Student Support Services offers free scheduled tutoring up to 2 hours per week to qualifying students in room 105 of the Learning Resources Center. To qualify, students must either be a first generation college student, be economically disadvantaged, have a physical disability, or have a learning disability.

ACADEMIC INSTRUCTION EMERGENCY MANAGEMENT PLAN:

In the event that Chesapeake College needs to close for an extended period of time due to a flu pandemic, severe weather event, or other emergency situation, consideration will be given to the timing and duration of the closure as follows:

1. Closure during the semester for up to one week – there will be an opportunity to make up work missed without significant alteration to the semester calendar.
2. Closure extending beyond one week (or in situations where classes are cancelled on the same days/evenings over multiple weeks) – the College may extend the length of the semester. Depending on the timing of the closure, scheduled breaks, end of semester dates, and/or the processing of final grades.
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COMMUNICATION WITH OTHER CLASSMATES: Experience has shown that when students form study groups and spend time discussing course topics with other students, their understanding of many of the difficult concepts greatly increases, and exam scores improve as a consequence. Therefore, students are encouraged to work on homework and study for exams with other students. I would encourage you to get to know the students around you and to ask if they would like to exchange email addresses and/or phone numbers. This is optional, of course but will help a great deal if you must be absent from class for some reason, and need to get notes and/or handouts from a classmate.

Students can acquire information about closures on the College website or by calling 410-8225400 or 410-228-4360. Chesapeake College courses held at off campus sites will follow the protocol of the host facility.

CLASSROOM ETIQUETTE:

I expect all of my students to behave in an adult, respectful and polite manner towards both the instructor and their fellow classmates. To that end, it is expected that students will not engage in behaviors that distract the instructor and/or fellow classmates such as talking to each other, talking on cell phones, text messaging, leaving class for non-emergency needs, etc. If you need to ask your neighbor for clarification, please do so in a whisper. Or you can ask me, as questions asked for the benefit of the entire class are welcomed and encouraged. College policy prohibits young children accompanying parents to class. I will give one warning to individuals that are disrupting the class.

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Chesapeake College Course Outcomes
Course Number and Title: MAT 113, College Algebra

Chesapeake College General Education Competencies

The course material in this class should contribute to the development of many of the College's general education objectives. This course should increase a student's skills and knowledge to:

1. Communicate in oral and written English
    a. Write clearly, correctly, logically and ethically
    b. Express their own ideas coherently, as well as work collaboratively with others in a responsible manner.
2. Read with comprehension
    a. Summarize key concepts, make inferences, and draw conclusions
    b. Use appropriate reading strategies to analyze and understand different types of texts
3. Think critically; reason abstractly
    a. Identify, access, and interpret relevant information
    b. Apply critical thinking skills to the solution of complex problems
4. Apply technology to learning
    a. Use current technology to communicate effectively with others in writing, presentations, and electronic communications
5. Understand and interpret numerical data using quantitative method and literacy
    a. Recognize mathematical problems in a variety of contexts, including their individual academic program, and apply mathematical skills in order to solve them.
    b. Demonstrate the mathematical reasoning skills required in problem-solving and decision-making situations
    c. Interpret results and draw conclusions

d. Interpret mathematical models such as formulas, tables, and schematics, and draw inferences from them
e. Communicate mathematical information symbolically, visually, numerically, and verbally
f. Demonstrate knowledge and interpretation of mathematical relationships, facts, concepts, and theories and show how they apply to their academic, professional, and personal lives
g. Evaluate mathematical information and concepts

Common Core Learning Outcomes:

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

1. Apply the mathematical skills required in performing operations and problem-solving related to polynomial, rational exponent and absolute value equations and inequalities.
2. Analyze mathematical models such as formulas, equations, functions, graphs, and tables and draw inferences from them.
3. Communicate mathematical information conceptually, symbolically, visually by graphing functions, and numerically using appropriate terminology.
4. Evaluate and/or interpret mathematical information, relationships, facts, concepts, and theories related to solving and graphing equations.

Common Course Outline of Material Included in the Course:

1. Linear and Quadratic Equations, Inequalities, and Mathematical Models.
2. Linear, Quadratic, Polynomial, and Rational Functions and Graphs.
3. Exponential and Logarithmic Functions.
4. Systems of Equations and Inequalities.
5. Matrices and Determinants. (As time allows)
6. Conic Sections (As time allows)

Course Outline by Textbook Chapter:

Chapter	Topics	Textbook Sections
1	Graphs, Functions and Models	1.1 – 1.2
2	More on Functions	2.1 – 2.5
3	Quadratic Functions and Equations; Inequalities	3.1 – 3.5
4	Polynomial Functions and Rational Functions	4.1 – 4.5
5	Exponential Functions and Logarithmic Functions	5.1 – 5.6

CHAPTER OBJECTIVES AND HOMEWORK ASSIGNMENTS:

After completing each chapter, you should be able to accomplish the indicated objectives.
You will also need to complete the homework assignments for that chapter on MyMathLab.

Chapter 1 –
Graphs, Functions and Models:

1. Review graphing linear equations
2. Find the domain and range of a relations and functions.
3. Evaluate a function.
4. Use the vertical line test to identify functions.
5. Find the distance between two points.
6. Find the midpoint of a line segment.
7. Write the standard form of a circle's equation.
8. Give the center and radius of a circle whose equation is in standard form.
9. Convert the general form of a circle's equation to standard form.

Read: Sections 1.1 – 1.2 Complete the MyMathLab homework assignments.

Additional written homework problems are assigned via Canvas and are expected to be turned in during the following class meeting. None will be accepted late.

Chapter 2 –
More on Functions:

1. Use graphs to locate relative maxima or minima, odd or even functions, recognize symmetries, increasing or decreasing functions.
2. Understand and use piecewise functions.
3. Find and simplify a function's difference quotient.
4. Graph functions involving a sequence of transformations.
5. Combine functions using the algebra of functions, specifying domains.
6. Form composite functions.

Read: Sections 2.1 – 2.5 Complete the MyMathLab homework assignments.

Additional written homework problems are assigned via Canvas and are expected to be turned in during the following class meeting. None will be accepted late.

Chapter 3 –
Quadratic Functions and Equations; Inequalities:

1. Perform computations involving complex numbers
2. Find zeros of quadratic functions and solve quadratic equations by using the principle of zero products, by using the principle of square roots, by completing the square, and by using the quadratic formula.
3. Solve equations that are reducible to quadratic.
4. Solve applied problems using quadratic equations.
5. Graph quadratic functions.
6. Find the vertex, axis of symmetry, and minimum or maximum value of a quadratic function using the method of completing the square.
7. Solve rational equations.
8. Solve radical equations.
9. Solve equations with absolute value.
10. Solve inequalities with absolute value.

Read: Sections 3.1 – 3.5 Complete the MyMathLab homework assignments.

Additional written homework problems are assigned via Canvas and are expected to be turned in during the following class meeting. None will be accepted late.

Chapter 4 –
Polynomial Functions and Rational Functions:

1. Recognize characteristics of graphs of polynomial functions.
2. Determine end behavior, zeros, and multiplicities..
3. Use the Intermediate Value Theorem.
4. Understand the relationship between degree and turning points.
5. Use synthetic division to divide polynomials.
6. Use the Factor Theorem to solve a polynomial equation.
7. Use the Rational Zero Theorem to find possible rational zeros and find all zeros.
8. Solve polynomial equations.
9. Use Descartes' Rule of Signs.
10. Find the domains of rational functions.
11. Identify vertical , horizontal, and slant asymptotes .
12. Solve applied problems involving rational functions.
13. Solve polynomial and rational inequalities.

Read: Sections 4.1 – 4.6 Complete the MyMathLab homework assignments.

Additional written homework problems are assigned via Canvas and are expected to be turned in during the following class meeting. None will be accepted late.

Chapter 5 –
Exponential Functions and Logarithmic Functions:

1. Find the inverse of a function and verify.
2. Find the inverse of a function and graph both functions on the same axes
3. Use the horizontal line test to determine if a function is one-to-one
4. Graph exponential functions
5. Evaluate exponential functions and graph them.
6. Change from exponential equations to logarithmic equations.
7. Graph logarithmic functions.
8. Use common and natural logarithms.
9. Use the product rule, quotient, and power rules [for logarithmic functions] to expand and condense logarithmic expressions.
10. Use the change-of-base property.
11. Solve exponential equations.
12. Solve logarithmic equations.
13. Solve applied problems involving exponential and logarithmic functions.
14. Use compound interest formulas.
15. Model exponential growth and decay.

Sections 5.1 – 5.5. Complete the MyMathLab homework assignments.

Additional written homework problems are assigned via Canvas and are expected to be turned in during the following class meeting. None will be accepted late.