Math 116 - 750: College Algebra – SPRING 2016
WEB Course – CRN 39063

Description:

This course provides students with the ability to understand and apply mathematical skills and concepts. Math 116 students will be able to: use fundamental mathematical reasoning principles; interpret information presented in tables or graphical displays; use graphical, symbolic, and numeric methods to solve practical problems; and apply an appropriate mathematical model to the problem to be solved.
The content of the course will include:

- Introduction to Functions
- Linear and Quadratic Functions
- Polynomial and Rational Functions
- Exponential and Logarithmic Functions
- Systems of Equations

Learning Objectives:

This course fulfills the Quantitative Reasoning requirement in the Foundations category of WKU's Colonnade program. As part of that program, Math 116 has the following learning objectives:
Students will demonstrate the ability to:

1. Interpret information presented in mathematical and/or statistical forms.
2. Illustrate and communicate mathematical and/or statistical information symbolically, visually and/or numerically.
3. Determine when computations are needed and execute the appropriate computations.
4. Apply an appropriate model to the problem to be solved.
5. Make inferences, evaluate assumptions, and assess limitations in estimation modeling and/or statistical analysis.

Prerequisite:

At least one of the following criteria must be met to enroll in Math 116:

- Math ACT score of 22 or better
- Math SAT score of 510 or better
- A score of 14 or better on the WKU Math Placement Exam within the last year
- A score of 14 or better on the KYOTE College Algebra Exam within the last year
- A score of 50 or better on the COMPASS (College Algebra) within the last year
- Completion of DMA 096C with a grade of C or better

Instructor: Leigh Ann Wells
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Email: leigh.wells@wku.edu (For a quick response, email is the best form of contact!)
Office Hours: Available by appointment (request by email or call)

Required:

A subscription to MyMathLab is required. Instructions for class registration are on Blackboard.

Textbook:

Essentials of College Algebra with Modeling and Visualization, 4th Edition, 2012, Rockswold.
Textbook is optional; the entire content of the textbook can be accessed online within the MyMathLab program.

Blackboard:

Students will be required to access the Blackboard site for this course regularly in order to read announcements, watch videos and print class examples.

Calculator:

Students are expected to have a graphing calculator from the TI 83 / TI 84 family. Other graphing calculators will not be allowed. A graphing calculator's memory will be cleared before being allowed to use on a test.

Class Format:

College Algebra has traditionally been a difficult course for students at WKU. While some believe that Web courses are easier than face-to-face courses, this is not true for MATH 116. Students in this course are expected to complete all of the same assignments as those in the traditional version, and they will be held to the same standards. They must be willing to spend time every day checking email, reading announcements, watching video lectures and completing

examples posted on Blackboard. They must be diligent in completing homework assignments, quizzes and proctored exams on time. My main goal in this class is to help you to think logically, improve your problem-solving skills and allow you to think mathematically in different ways. There are recorded video lectures, which you will be expected to watch before completing each day's assignment. There will be class examples to accompany these videos also on Blackboard. You will need to watch the videos, take notes and complete the class examples as if you are in the classroom. It is **IMPERATIVE** that the videos are watched to be successful in the class. Students must be willing to seek help by emailing the instructor, visiting the Math Lab/START Center/Learning Center, or reading the textbook/ebook or re-watching the videos. Finally, Students who wish to be successful MUST take ownership of their own learning experience!

Homework: Homework will be assigned using MyMathLab. A homework assignment will be given for each section covered and will be due at 11:59 pm (Central Time) on the dates listed in MyMathLab and on the course schedule below. Students will have unlimited attempts to correctly complete each problem within the time constraints of the due dates. You are allowed three attempts on most problems. After you have missed the problem, there will be a button at the bottom of the screen where you can get a similar problem. This will allow you to try again. You can do this as many times as needed to be successful on a problem.

While homework will remain open until the end of the semester, questions completed after the due date will be assessed with a late penalty of 10% per day.

A review for each module exam will be included in the homework assignments. **A grade of at least 90% will be necessary on each module exam review before a student is allowed to take the associated exam.**

Quizzes: Quizzes will be assigned using MyMathLab and **must** be completed by the due date posted. Students will have a maximum of two attempts to take each quiz. The higher of the two scores will be counted toward the grade in the class. Late submissions will receive **NO** credit.

Organizing and keeping the class examples, your extra notes and paper work used to complete your homework will be beneficial in preparing for exams.

Module Exams: Exams must be completed in a proctored setting through the Division of Extended Learning and Outreach (DELO). Module exams will be administered using MyMathLab, which algorithmically generates different versions of each exam. Students will work their exams on paper and enter the answers into the computer. For all exams, the instructor will review the written work and award partial credit when deemed appropriate.

Each student will be allowed a **maximum of two attempts** for each Module Exam as described below. The score recorded in the grade book will be the higher of the scores from the two attempts.

First Attempt: The first attempt for each exam **MUST** be taken by the due date listed below and in the Schedule. In addition, each student **MUST** complete the corresponding module exam review on MyMathLab with a score of **90%** or higher before that student will be allowed to complete the first exam attempt.

Second Attempt: The second attempt for each exam (is optional) and also must be taken by the date listed below and in the Schedule. Each student must complete a second review on MyMathLab with a grade of 90% or higher before that student will be allowed to complete the second attempt. Please note that the second attempt is **optional**. If you are happy with your score from the first attempt, you do not need to take the exam again.
A student may ONLY take one exam per day. The score for a module exam will be the higher of the two attempts.

Exam Deadlines: **Exam 1 Attempt 1 – Must be completed by Thursday, February 18th**
Exam 1 Attempt 2 – Must be completed by Thursday, February 25th

Exam 2 Attempt 1 – Must be completed by Friday, March 18th
Exam 2 Attempt 2 – Must be completed by Friday, March 25th
Exam 3 Attempt 1 – Must be completed by Wednesday, April 6th
Exam 3 Attempt 2 – Must be completed by Wednesday, April 13th

Exam 4 Attempt 1 – Must be completed by Thursday, April 28th
Exam 4 Attempt 2 – Must be completed by Thursday, May 5th

FINAL EXAM – MUST BE COMPLETED BY THURSDAY, MAY 12th

Course Grade: A weighted average for this course will be calculated using the following:

Homework	10%	
Quizzes	10%	
Module Exams	60%	(4 exams worth 15% each)
Final Exam	20%	

Letter grades will be assigned from the weighted average using the following grading scale. Standard rules of rounding will apply.

A	90 % – 100 %
B	80 % – 89 %
C	70 % – 79 %
D	60 % – 69 %
F	0 % – 59 %

Notes: Although students may "pass" with a D, they should be aware that many courses require a C in Math 116 as a prerequisite and several majors require a C in Math 116 to satisfy a general education requirement in mathematics.

Important Dates: **Monday, February 1, 2016** is the last day to drop this course without a grade and without paying a fee.
Friday, March 18, 2016 is the last day to drop this course with a W, or change to an audit.

WKU Math Lab: Bowling Green Campus, COHH 2124 (Check with Math Department on available hours) Tutors in the Math Lab are undergraduate or graduate math students and are familiar with the College Algebra course content. Tutoring is free. Please take your laptop with you, or print out your problems, if you intend to ask them questions regarding the MyMathLab assignments.

The Learning Center: The Learning Center provides free supplemental education programs for all currently enrolled WKU students. For more information, or to schedule a tutoring appointment, please call TLC at (270) 745 -6254 or log on to their website at www.wku.edu/tlc

WKU-G START Center: The WKU Glasgow START (Student Tutoring and Resource Team) Center is available to assist students with their WKU courses. The START Center is located in Room 163 and will be open Monday through Thursday 8 am to 7 pm and on Friday from 8 am to noon. The START Center will offer assistance in math, writing, chemistry and Spanish. (Other areas may be added throughout the semester.) Computers are available for student use and the tutors can provide assistance with the online software associated with classes and also with word processing and other software.

ADA Statement: In compliance with university policy, students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Student Accessibility Resource Center (SARC) in Downing Student Union, 1074. The SARC telephone number is (270) 745-5004; TTY is (270) 745-3030 or email sarc@wku.edu or visit the website at wku.edu/sarc. Per university policy, please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the SARC.

Academic dishonesty will not be tolerated. This includes any form of cheating or plagiarism. The policy is found in the *WKU Student Handbook.*

!!!!!! I reserve the right to adjust the grading scale and syllabus, if it is deemed necessary.

Schedule:
Module 1 – Introduction to Functions

DUE – DATE	SECTION
1/25	Syllabus and Orientation
1/26	R.2 Integer Exponents
1/27	R.3 Polynomial Expressions
1/28	Quiz 1 (R.2, R.3)
1/29	R. 4 Factoring
2/1	R.5 Rational Expressions
2/2	Quiz 2 (R.4, R.5)
2/3	R.6 Radical Notation and Rational Exponents
2/4	R.7 Radical Expressions
2/5	Quiz 3 (R.6, R.7)
2/8	1.1 Numbers, Data and Problem Solving
2/9	1.2 Visualizing and Graphing Data
2/10	1.3 Functions and Their Representation
2/11	Quiz 4 (1.1, 1.2, 1.3)
2/12	1.4 Types of Functions
2/15	1.5 Functions and Their Rate of Change
2/17	**REVIEW 1 – FIRST ATTEMPT**
2/18	**TEST 1 – FIRST ATTEMPT**
2/24	**REVIEW 1 - SECOND ATTEMPT (Optional)**
2/25	**RETEST 1 – SECOND ATTEMPT (Optional)**

Module 2 – Linear and Quadratic Functions

DUE – DATE	SECTION
2/22	2.1 Linear Functions and Models
2/23	2.2 Equations of Lines
2/24	Quiz 5(2.1, 2.2)
2/25	2.3 Linear Equations
2/26	2.4 Linear Inequalities
2/29	2.5 Absolute Value Equations and Inequalities
3/1	Quiz 6 (over 2.3, 2.4, 2.5)
3/2	3.1 Quadratic Functions and Models
3/3	3.2 Quadratic Equations and Problem Solving
3/4	3.3 Complex Numbers
SPRING BREAK – 3/7 – 3/11	
3/14	Quiz 7 (over 3.1, 3.2, 3.3)
3/15	3.4 Quadratic Inequalities
3/17	**REVIEW 2 – FIRST ATTEMPT**
3/18	**TEST 2 – FIRST ATTEMPT**
3/24	**REVIEW 2 - SECOND ATTEMPT (Optional)**
3/25	**RETEST 2 – SECOND ATTEMPT (Optional)**

Module 3 – Polynomial and Rational Functions

DUE - DATE	SECTION
3/21	4.1 More Nonlinear Functions and Their Graphs
3/22	4.2 Polynomial Functions and Models
3/23	4.3 Division of Polynomials
3/24	Quiz 8 (over 4.1, 4.2, 4.3)
3/25	4.4 Real Zeros of Polynomial Functions
3/28	4.5 The Fundamental Theorem of Algebra & 4.7 More Equations/ Inequalities
3/29	Quiz 9 (over 4.4, 4.5 & 4.7)
3/30	4.6 Rational Functions and Models & 4.7 More Equations and Inequalities
3/31	Quiz 10 (over 4.6 & 4.7)
4/1	4.8 Radical Equations and Power Functions
4/5	**REVIEW 3 – FIRST ATTEMPT**
4/6	**TEST 3 – FIRST ATTEMPT**
4/12	**REVIEW 3 - SECOND ATTEMPT (Optional)**
4/13	**RETEST 3 – SECOND ATTEMPT (Optional)**

Module 4 – Exponential and Logarithmic Functions and Systems of Equations

DUE - DATE	SECTION
4/11	5.1 Combining Functions
4/12	5.2 Inverse Functions and Their Representations
4/13	Quiz 11 (over 5.1, 5.2)
4/14	5.3 Exponential Functions and Models
4/15	5.4 Logarithmic Functions and Models
4/18	Quiz 12 (over 5.3, 5.4)
4/19	5.5 Properties of Logarithms
4/20	5.6 Exponential and Logarithmic Equations
4/21	Quiz 13 (over 5.5, 5.6)
4/22	6.1 Systems of Equations in Two Variables
4/25	Quiz 14 (over 6.1)
4/27	**REVIEW 4 – FIRST ATTEMPT**
4/28	**TEST 4 – FIRST ATTEMPT**
5/4	**REVIEW 4 - SECOND ATTEMPT (Optional)**
5/5	**RETEST 4 – SECOND ATTEMPT (Optional)**
5/11	**REVIEW FINAL EXAM**
5/12	**FINAL EXAM**