

MA 109: College Algebra, Section 220

College of Arts & Sciences (A&S)

Department of Mathematics (MA)

Summer 2014

Please read this syllabus carefully. It contains essential information about the course organization, grading, tests, etc. If you need any additional explanation, please don't hesitate to me.

Instructor Information:

Instructor: Sarah Nelson

Office: Patterson Office Tower 718

Phone: 859-257-6806

Email: sarah.nelson@uky.edu (preferred contact method)

Office Hours: Throughout the summer, I will hold interactive office hours on *twiddla.com*. You can join the office hours by going to the following link: <http://www.twiddla.com/1659377>. Note that you do not need to sign up to join. This site is a basically an interactive white board. So you can raise your hand and post questions in text or write free style. And then I can respond immediately. I hope to have times to you soon.

We have a class Piazza account for MA109 Online. Piazza is designed to host class discussions. Thus, I encourage everyone to post and respond to questions here. Every student should automatically receive a welcome email from Piazza with instructions for how to join the class. If you have not yet received this email, pleas, let me know.

If you have questions throughout the summer, you should look on Piazza to see if one of your classmates has gotten stuck on a similar problem. If there is already a similar problem with a reply, then you should see if you can follow the arguments and adapt them to match your problem. If there does not yet appear to be any help, please post your question. Then your classmates and I will write back with help. So that you can receive adequate help, when you post a question, please try to give all of the details of the equation or clearly reference the problem, i.e. WebAssign homework 12 problem 2.

Students are encouraged to check Piazza regularly to help other students. Students who give good responses will be endorsed by the instructor so that you know they are correct. Your instructor reserves the right to modify or delete any posts that are incorrect, *etc.* Students who help other students on Piazza will be noted and this may be persuasive evidence at the end of the semester for anyone who is particularly close to the next grade up.

In addition to interactive office hours and class discussions, you may email me through WebAssign or email me directly. In some cases, I may point you to discussion in Piazza to see if you can follow the answer before you ask for more help. I regularly check my email and will return emails within one business day. Note that emails sent later in the day and on the weekends might not be answered until the next week day. Thus, I encourage each of you to look at your homework early and ask questions early.

Course Web Page: <http://www.ms.uky.edu/~ma109o/>

Homework Web Page: <http://www.webassign.net/>

Class Time and Location: online

Required Course Materials:

Textbook: *College Algebra*, by Thomas W. Hungerford and Douglas J. Shaw. We use a customized version of the original book, which is specifically published for the University of Kentucky and can be purchased at any UK bookstore. There is also an ebook version if you prefer available on www.webassign.net. **Note: This is the name of the custom edition at the UK bookstores. If you buy the book elsewhere, you need to look for *Contemporary Precalculus* (5th Edition) by Hungerford and Shaw.**

Access Code for WebAssign: If you purchase your textbook new at any UK bookstore, this will come bundled with the book. Otherwise you will need to purchase the access code from the homework website www.webassign.net.

Lecture Notes: We will be using notes written for you as a complement/guide to the textbook in order to assist you throughout the course. We will also be using practice problems at the end of every set of notes that have been designed to get you practicing during lecture. These are available on our homework website, www.webassign.net, under the “Resources” tab.

Calculator: For part of the course you will need a graphing calculator. In class, I will be using a TI-84. I do not personally know how to use any calculator other than the TI-84, so I may not be able to help you with the specifics of other calculators. Nevertheless, most graphing calculators have the same basic functions, and you should be able to learn about your calculator by reading the manual.

Using the calculator during a test for any reason other than performing the required calculations (for example, to recall a previously stored formula) will be considered cheating. You may use any calculator that is allowed by the ACT including graphing calculators that the ACT allows. (See <http://www.actstudent.org/faq/answers/calculator.html>.) Note that **you will not be allowed to use the calculator on a cell phone**, or any other communication device. Furthermore, you may not use any calculator that has a computer algebra system (CAS) or a QWERTY keyboard. In particular, you may **not** use the TI-Nspire CAS, any TI-89, any TI-92, the HP 48GII, any HP 40G, any HP 49G, any HP 50G, the Casio Algebra fx 2.0, the Casio ClassPad 300, the Casio ClassPad 330, or any Casio CFX-9970G.

Minimum Technology Requirements: In order to participate in this course, you will need access to a computer with the minimum hardware, software and internet configuration described at this site:

http://www.webassign.net/user_support/student/system_requirements.html.

You will also need access to either

- Windows XP or later with Microsoft Internet Explorer, version 7 or later, or
- Mac OS X 10.4 or later with Apple Safari, version 3 or later.

Note: the use of Internet Explorer or Safari is NOT recommended for use with WebAssign. Mozilla Firefox is the recommended Internet browser for the course.

You may need to install a number of plugins on your computer. The above website will give you a link to a list.

If you experience technical difficulties with accessing course materials, the Customer Service Center may be able to assist you. Their hours are Monday through Thursday, 8 a.m. to 10 p.m. ET, Friday, 8 a.m. to 8 p.m. ET, Saturday, 12 p.m. to 6 p.m. ET, and Sunday, 12 p.m. to 10 p.m. ET. You may reach them at (800) 955-8275 or by e-mail through

<http://www.webassign.net/info/help.html>.

Please also inform me when you are having technical difficulties.

The Teaching and Academic Support Center

(TASC) website (<http://www.uky.edu/ukit/atg/tasc>)

offers additional information and resources that can promote a successful distance learning experience. They may also be reached at 859-257-8272.

Overview of the Course: Selected topics in algebra. Develops manipulative algebraic skills and mathematical reasoning required for further study in mathematics. Includes brief review of basic algebra, quadratic formula, systems of linear equations, introduction to functions and graphing. This course is not available for credit to persons who have received credit in any mathematics course of a higher number with the exceptions of MA 111, 112, 123, 162, 201 and 202. Credit not available on the basis of special examination. Prereq: Two years of high school algebra and a math ACT score of 21 or above or a math SAT score of 510 or above; or MA 108R; or a grade of C or better in MA 111; or appropriate score on the math placement test.

Course Content: In this course we will cover the great majority of the topics from Chapters 1 through 5 and Chapter 11 of the text by Hungerford and Shaw. The sections in the text correspond to the lecture notes for MA 109. The course schedule can be found in the Course Schedule link on the main course web page. The topics include Solving Equations and Inequalities, Systems of Equations, Application Problems, the Cartesian Coordinate System, Functions, Function Notation, Graphs of Functions, Rates of Change, Difference Quotients, Polynomial Functions, Rational Functions, Exponential Functions, and Logarithmic Functions.

Course Goals: The learning goals for each activity are listed at the top of the activity in the Lecture Notes Companion for MA 109. Your main goal is to learn the material well enough so that you can use the tools of College Algebra in an applied context, such as business or the social sciences. It is also essential that you learn well the techniques discussed in this course if you plan on taking (and want to succeed in) the subsequent course, MA123 (Elementary Calculus and its Applications).

It is virtually impossible to learn mathematics by only listening to an instructor. To understand what this means, consider the impossibility of learning to play basketball by listening to someone describe how to play it. You will not learn the material in this course by listening to the lectures, and thinking to yourself – “Yes, I understand that.” You must

work the problems and make mistakes before you will begin to learn. The instructor's task is that of an assistant to help you learn as much of the material as you desire. In this course it will not be sufficient to memorize an algorithm for doing specific types of problems. You will be expected to understand the material well enough so that you are able to do problems similar to, but not identical to, the ones we work in class and the ones you are assigned for homework.

Student Learning Outcomes: Students who successfully complete this course will be able to:

- Recognize that the equation of a line can take many forms. In particular, there are times when point-slope form is more appropriate than slope-intercept form and vice-versa.
- Describe the connection between the slope of a line and a rate of change.
- Solve equations algebraically.
- Convert a verbal problem description into a symbolic problem description.
- Understand the Cartesian coordinate system.
- Recognize the relationship between the solutions of an equation and the graph of an equation.
- Recognize the graphs of functions including linear, quadratic, polynomial, rational, step, exponential, and logarithmic.
- Utilize a variety of problem solving techniques to solve multi-step problems.

Grading:

The course grade will be based on two midterm exams, a final exam, a homework score, and a quiz score from three quizzes. Each midterm is worth 100 points, the cumulative final is worth 125 points, homework is worth 100 points, and each quiz is worth 25 points. In other words, each midterm is worth 20% of your final grade, the final exam is worth 25% of your final grade, homework is worth 20% of your final grade, and the quizzes are worth 15% of your final grade. Thus, you can earn a total of 500 points for the course. Your final grade for the course will be based on the total points you have earned as follows:

- A: 450-500
- B: 400-449
- C: 350-399
- D: 300-349
- E: 0-299

Exams: As we already mentioned, each midterm exam is worth 100 points and the final exam is worth 125 points. Each exam is to be taken either on campus at the time and date

below proctored by me OR off campus at a proctoring location to be arranged by you on the date listed below. Details on setting up a proctor are available on the course website. It is your responsibility to arrange for a proctor and inform me of your proctoring time and location at least one week prior to the exam date.

You must bring a photo ID to each exam. You may use a graphing calculator during the exams, but NO calculator with a Computer Algebra System (CAS) or a QWERTY keyboard is permitted. Absolutely no cell phone use during an exam is allowed. Cell phones must be turned completely off during exams. The final exam will be comprehensive. Dates and times for the exams are as follows:

- Exam 1: 30 June 2014 (Monday)- 6:00 PM - 8:00PM Eastern Daylight Time
- Exam 2: 22 July 2014 (Tuesday)- 6:00 PM - 8:00PM Eastern Daylight Time
- Exam 3: 7 August 2014 (Thursday)- 6:00 PM - 8:00PM Eastern Daylight Time

All on campus exams will be taken in Whitehall Classroom Building 349.

If you have a documented disability that requires academic accommodations, please contact me as soon as possible. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address jkarnes at email.uky.edu) for coordination of campus disability services available to students with disabilities.

Time Conflicts for Exams: If you have a time conflict with the regularly scheduled exam due to a university excused absence, you will be permitted to take an alternate exam. Students who need an alternate exam should contact me at least one week before the regularly scheduled exam. **Whenever possible, students are encouraged to contact me at least two weeks prior to the regularly scheduled exam.**

Homework: The online homework system, WebAssign, is found at the link

<http://www.webassign.net/>. On your first visit to the homework site click "I have a class key." You will be prompted to enter the class key for this section. Note: Our institution code is **uky**. YOU DO NOT NEED TO PURCHASE ANYTHING IN ORDER TO LOG IN TO THE HOMEWORK SYSTEM. YOU HAVE A TWO WEEK TRIAL PERIOD.

- My class key: uky 5849 1657

You will then be prompted to select a login username, password, and email. Fill in the email address that you actually use. You do not have to use your *uky.edu* email address.

Each student has an individual, personal version of the web-based homework assignments to work and submit. In general, you may attempt a problem up to 100 times. Only your final (and hopefully correct!) answer will be recorded for your homework grade. Additional attempts at a problem need not be made in the same online session, so you can reattempt the problem after looking in your notes, looking in your book, rewatching the lecture, or

getting help from me. If you submit the correct answer to a problem before the due date, you receive full credit for the problem. If the answer you submit is not correct, the first thing to **check** is **the syntax** you used to submit the answer. A typo will obviously result in an incorrect answer. If you check this carefully, and your answer is still incorrect, go back and rework the problem. It is often better to move on and work other problems first, since it is quite easy to make the same error over and over. If after a couple of attempts, you do not get a correct answer, then try to get help from me. Although answers to the problems have been checked, it is still possible that a few errors remain in the system.

The homework due dates are listed in the course schedule. Homework assignments are always due at 5:00 pm, but there is usually a grace period until 11:59 pm EDT. If there is a computer problem prior to 5:00 pm on the due date, an extension will be granted to all students. If there is a computer problem after 5:00 pm on a due date, you may not receive credit for any problems that were not answered prior to 5:00 pm.

There will be many homework sets throughout the semester. You can see the homework assignment due dates on the class schedule.

Homework extensions are extremely rare. You must have a university excused absence even to apply for an extension. (See the Attendance section of this syllabus for information about excused absences.) Certain excused absences do not necessitate extensions. If you miss class because of a university sponsored trip, it is almost always possible to complete your homework assignments before you leave for the trip. No extensions will be granted for planned trips unless the assignment was not posted at least 24 hours before you left for your trip. If this is the case, please submit a request for an extension. If you are requesting an extension for an online assignment, you must request an extension through WebAssign. If you miss assignments because of a serious illness or family emergency, please notify me of your absence by email as soon as possible. It is almost always possible for students to do this before the assignment is due. (If you do not have access to a computer, ask a friend to email your instructor.) As soon as you can, submit an extension request to me.

Your homework grade is based on the percentage of correct problems out of the total number of possible points. On each homework assignment, there is one extra point possible. Hence even if you do not get all problems correct, you can still earn a grade of 100 on the homework score. To calculate your current homework score use the following formula:

$$100 \cdot \frac{\# \text{ of HW Questions Correctly Answered}}{\text{Total } \# \text{ of HW Questions} - \# \text{ of HW Assignments}}$$

It is possible to earn a few bonus points if you answer more than approximately 90% of the questions correctly.

Be sure to keep a record of your homework scores. Print a copy of your scores each time you work on an assignment. It is fine if this is a screen shot of your computer.

Quizzes: You will also have three quizzes through WebAssign. Each quiz is worth 25 points for a total of 75 points. These quizzes will be accessible through WebAssign. For the quizzes, you may attempt each problem 1 time *and not 100 times, like on a regular homework*

assignment. They are meant to encourage you to keep up with the material and prepare you for exams. Thus, I encourage you to work independently on the quizzes. The due dates for the quizzes are on the course schedule.

Attendance, Participation, and Excused Absences: All course materials are on-line and it is YOUR responsibility to access material in a timely manner. To help keep you on track, I have provided a course schedule on the website that you should follow. You are expected to spend a MINIMUM of 3 hours per DAY interacting with the course material. In addition, you are required to complete your exams on the dates on the course schedule. Exams need to be taken in a proctored setting, either on campus with me at the stated time and place or by an approved proctor.

If you have a university excused absence, (see 5.2.4.2 in Section IV of Student Rights and Responsibilities), you need to inform me as soon as possible. It is almost always possible to inform me of a university excused absence prior to the scheduled due date of an assignment or the scheduled exam date. You must inform me of your excused absence prior to due date unless an emergency prevents you from doing so. You must provide me with proper documentation for all university excused absences by placing it in my mailbox in POT 715 or scanning and emailing it to me. **If you inform me of an excused exam absence within two business days after the scheduled exam date, I will permit you to make-up the exam that you have missed.** If a student has excused absences in excess of one-fifth of the class contact hours, I may require the student to petition for a “W” or, in rare cases, to take an “I” for the course. Students in this situation should contact me as soon as possible to discuss their options.

Distance Learning Library Services: As a Distance Learning student you have access to the Distance Learning Library services at <http://www.uky.edu/Libraries/DLLS>. This service can provide you access to UK’s circulating collections and can deliver to you manuscripts or books from UK’s library or other libraries. The DL Librarian, Carla Cantagallo, may be reached at 859-257-0500, ext 2171, or 800-828-0439 (option #6) or lastly by email at dlservice@email.uky.edu. For an interlibrary loan visit:

<http://libraries.uky.edu/ILL>.

Classroom Behavior, Decorum, and Civility: The university, college and department has a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time-to-time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (Senate Rules 6.1.2). Equally, a faculty member has the right – and the responsibility – to ensure that all academic discourse occurs in a context characterized by respect and civility. Obviously, the accepted level of civility would not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors. Students who are not respectful, not civil, or disruptive in any way may be asked to leave the class.

Academic Honesty: All assignments, projects, and exercises completed by students for this class should be the product of the personal efforts of the individual(s) whose name(s) appear on the corresponding assignment. Cheating or plagiarism is a serious offense and it will not be tolerated. It will be thoroughly investigated, and it might lead to failure in the course or even to expulsion from the university. See Student Rights and Responsibilities in the University Senate Rules (Sections 6.3.1 and 6.3.2) for information on cheating, plagiarism, and penalties. A summary of recent changes to rules on cheating can be found at the Academic Ombud website. It's not worth it, so don't do it.

Personal Safety Reminder for Evening Sessions: Please be mindful of your personal safety in traveling to or from class after dark. It is recommended that students enrolled in evening sections do not walk to or from class alone. Anyone desiring an escort may arrange for one through the UK Campus Escort Program, SAFECATS. For information call 323-FREE or 323-3733. Students are also encouraged to choose the "Cat's Path" routes when traversing campus at night. These are sidewalks clearly marked with a blue and white paw print logo and are routes frequently used and accessible to major campus destinations. Though these paths are not designed to replace personal safety efforts, such as traveling in groups and remaining alert, there is increased police presence on these pathways.