

# MA 111-003:

## INTRO TO CONTEMPORARY MATHEMATICS

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SPRING 2018

UNIVERSITY OF KENTUCKY

MWF 10:00-10:50AM

CP 220

### Instructor Information:

**Instructor:** Amanda (Amy) Green  
**Office:** Patterson Office Tower 951 (POT 951)  
**Email:** [mrs.amy.green@uky.edu](mailto:mrs.amy.green@uky.edu) ← BEST METHOD OF CONTACT!  
**Office Phone:** (859) 257-6821  
**Office Hours:** MWF 10:55am – 11:55pm: POT 951.  
Other times available by appointment.

### Class Time and Location:

Monday, Wednesday, and Friday 10:00am to 10:50am in CP 220 (Chemistry & Physics Building, room 220.)  
All registered students are expected to attend and participate actively in class regularly.

### Undergraduate Assistants:

**Course Webpage:** CANVAS: <https://uk.instructure.com/>

### Suggested Textbooks:

If you would like to have references beyond the notes provided in class, here are a few suggestions. Be aware that some notation and terminology might differ, but the explanations and examples can be a great resource.

1. *Math in Society* by David Lippman: this is available free online at <http://www.opentextbookstore.com/mathinsociety/>
2. *Excursions in Modern Mathematics* by Peter Tannenbaum; any edition.
3. *For All Practical Purposes* by COMAP; any edition.
4. Website for the MA 111 course coordinator (copies of lecture slides/notes): <http://ms.uky.edu/~ndng224/MA111/>

### Course Goals:

1. To expose students to a variety of mathematical topics, many of which they would never see in a traditional algebra-based math class.
2. To encourage students to persist in solving problems and to develop an appreciation for the beauty of mathematical solutions.
3. To recognize the value of mathematics in solving a variety of practical (and fun) problems in society and culture.

## Student Learning Outcomes:

This course will be an introduction to some modern mathematical methods in application to real life problems. It is expected that by the end of the semester, students will acquire an informal understanding of a variety of new mathematical methods and will be able to appreciate their power and beauty. By the end of the semester, students should be able to demonstrate a proficiency in the application of mathematical knowledge for modeling solutions to questions drawn from real life.

## Grading:

You will be evaluated in this course in the areas below, weighted by the given percentages.

Participation	15%
Project	10%
Homework	15%
Mini-Exams (3 out of 4 best scores)	15% (5% each mini-exam)
Exams (3 of the 4 best scores)	45% (15% each exam)
TOTAL GRADE POSSIBLE	100%

Your overall letter grade will be based on the following percentages (rounded to the nearest whole percent.)

A 90% - 100%	B 80% - 89%	C 70% - 79%	D 60% - 69%	E 0% - 59%
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## Participation:

This portion of your grade will be earned by *attending class on a regular basis (without arriving late or leaving early)*, completing in-class assignments/quizzes, and actively participating in the lesson. You will often be allowed (and encouraged) to work in groups during our class meetings.

This class is very interactive. Therefore, attendance is mandatory. The list of excused absences includes illness, death of a family member, any trips organized by the university, and religious holidays. Excused absences must be reported as soon as possible, within a week at the latest. Appropriate notification of absences due to university-related trips is required prior to the absence. *Senate Rule 5.2.4.2.*

To report an absence, **email me (your name, section, date, reason)** at the email address provided above within one business day of the absence. You are also expected to furnish proof demonstrating the cause compelling you to miss class at the next class meeting for which you are present.

Unexcused absences include missing class entirely without an excuse, showing up more than 5 minutes late or leaving early without an excuse, and neglecting to stay on task. If there are special circumstances that will require you to be late to class or must leave early on a regular basis, please contact me as soon as possible.

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused) per University policy.

Note: There is a procedure for withdrawing from a class. You have not withdrawn if you simply quit attending.

Math is not a spectator sport!

### **Project:**

This portion of your grade will be earned by completing a written project. I will go into more detail about the project in the middle of the semester. You will be required to submit a copy of your project on Canvas.

### **Homework:**

This portion of your grade will be earned by completing individual online assignments outside of class. These assignments will be assigned on a weekly basis and will be online at:

<https://webwork.as.uky.edu/webwork2/MA111-S18-Green/> ← There will also be a link on CANVAS.

WeBWork is free to students. You can LOGIN automatically via link provided on CANVAS. Homework deadlines will be announced in class and on CANVAS.

These problems offer valuable additional practice on the course topics. Please make sure to set aside an adequate amount of time to work on these problems. I will not be expected to respond to homework questions on the evening of the due date. If you need an extension, please submit a request via the WeBWork system or by email.

### **Mini-Exams:**

We will have a mini-exam midway through each of the four topics we cover. They are designed to give you an idea of the progress that you are making with the material. We will spend 20-25 minutes on mini-exam days taking the mini-exam itself, then cover new material for the rest of the day. At the end of the semester, your grade is calculated by your HIGHEST THREE mini-exam scores.

### **Exams:**

We will have four exams throughout the semester, one for each of the topics we cover. The exams will be DURING CLASS. The final exam is the fourth topic exam and is NOT cumulative. At the end of the semester, your grade is calculated by your HIGHEST THREE exam scores.

### **Course Policy:**

Any questions about grading must be submitted within one week of the assignment being returned in class. I reserve the right to make changes to this syllabus and will make an announcement of any change in class.

### **Important MA 111-003 Dates: (tentative!!!)**

- Wednesday, January 24th: Mini-Exam #1
- Wednesday, February 7th: Exam #1
- Wednesday, February 21st: Mini-Exam #2
- Wednesday, March 7th: Exam #2
- Wednesday, March 28th: Mini-Exam #3
- Wednesday, April 7th: Exam #3
- Wednesday, April 18th: Mini-Exam #4
- Thursday, May 3rd @ 8:00am: Exam #4 (FINAL EXAM)

## Important Semester Dates

- Wednesday, January 10: First day of classes
- Monday, January 15: Martin Luther King Jr. Day – Academic Holiday
- Wednesday, January 17: Last day to add a class
- Wednesday, January 31: Last day to drop a class without receiving a grade
- Monday, March 5: Midterm of 2018 Spring semester
- Mon-Fri, March 12-16: Spring Break – No classes.
- Friday, March 30: Last day to withdraw from a class
- Friday, April 27: Last Day of Classes
- Mon-Fri, April 30 – May 4: Final Examinations
- Friday, May 4: End of 2018 Spring semester

NOTE: A student who drops a class on or before January 31st, will receive no grade. A student who withdraws after January 31st, will receive a grade of W. After March 30th, no student will be allowed to withdraw unless his/her dean determines that unusual circumstances merit the withdrawal.

## Course Help:

If you find that you need help in the course, THEN YOU SHOULD SEE ME AS SOON AS POSSIBLE!!! Email, call or stop by my office hours. If the posted office hours do not work with your schedule, please ask about an appointment. I attempt to answer all emails within 24 hours. Please do not expect a response between 2pm and 8pm.

Remember, you earn your grade for this class; I do not GIVE out any grades. Therefore, I expect everyone to try and do his or her best. You are responsible for your own experience in this class and university. Make it a great one!

Free tutoring can be found in the Mathskeller, CB 063, M-F, 9-5pm. <http://www.mathskeller.com>

## Note on Calculators:

**You are required to supply your own calculator for daily use.** Please see this page for a description of permitted calculators which may be used on exams and mini-exams: <http://www.actstudent.org/faq/calculator/html/>

You do not need a graphing calculator for this course; you will only need a basic calculator that can do addition, subtraction, multiplication, division and exponents. NO PHONES OR LAPTOPS.

## Rules and Regulations

**UK Core:** This course satisfies the Quantitative Foundations requirement of the UK Core General Education program, <http://www.uky.edu/GenEd>.

**Academic Integrity, Cheating and Plagiarism:** You should feel free to study with friends, but any work you submit for a grade should be your own work. This applies to all exams, quizzes and written assignments; with the exception of assignments that are specifically designated as group assignments. Academic dishonesty, in any form, will not be tolerated. This includes, but is not limited to, copying a classmate's work, allowing a classmate to copy your work, modifying an exam after it has been handed back in an attempt to deceive the instructor into believing the assignment was graded incorrectly, using cell phone/device during an exam. A student found guilty of academic dishonesty will receive an automatic E on the assignment, and in some cases the offense may lead to an E in the course, academic probation, or even expulsion. See sections 6.3.1 and 6.3.2 of the University Senate Rules for more information regarding academic integrity. You can also refer to the website <http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty.

**Disability Accommodations:** If you have documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodations from the Disability Resource Center (Suite 407, Multidisciplinary Science Building, 859-257-2754, [dtbeac1@uky.edu](mailto:dtbeac1@uky.edu)) for coordination of campus disability services available to students with disabilities. Make sure you know how to find Testing Schedule on the DRC website, <http://www.uky.edu/DisabilityResourceCenter/>. There is a link at the bottom of the homepage: View the Current Examination Schedule. This is your responsibility.

**Non-Discrimination Statement and Title IX Information:** The University of Kentucky faculty are committed to supporting students and upholding the University's non-discrimination policy.

Discrimination is prohibited at UK. If you experience an incident of discrimination we encourage you to report it to Institutional Equity & Equal Opportunity (IEEO) Office, 13 Main Building, (859) 257-8927.

**Acts of Sex- and Gender-Based Discrimination or Interpersonal Violence:** If you experience an incident of sex- or gender-based discrimination or interpersonal violence, we encourage you to report it. While you may talk to a faculty member or TA/RA/GA, understand that as a "Responsible Employee" of the University these individuals MUST report any acts of violence (including verbal bullying and sexual harassment) to the University's Title IX Coordinator in the IEEO Office. If you would like to speak with someone who may be able to afford you confidentiality, the Violence Intervention and Prevention (VIP) program (Frazee Hall Lower Level; <http://www.uky.edu/StudentAffairs/VIPCenter/>), the Counseling Center (106 Frazee Hall, <http://www.uky.edu/StudentAffairs/Counseling/>), and the University Health Services (<http://ukhealthcare.uky.edu/uhs/student-health/>) are confidential resources on campus.

### **Classroom Expectations:**

- I expect that you will attend and participate for the ENTIRE class.
- I expect that you will be respectful of yourself and others.
- Please do not eat your meals during class. Any drinks need to be in a container with a lid/cap.
- Please SILENCE YOUR CELL PHONES. They are NOT CALCULATORS.
- I expect that you will ONLY WORK ON OUR CLASS MATERIAL during our class time. No other class work, no surfing internet/checking social media sites, no puzzles, etc. during class. If you are working on non-class material, you will be asked to leave class and receive an unexcused absence.
- The university, college and department have 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. (S.R.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 will be asked to leave the class, with all subsequent penalties applied to their grade.

**There are certain things that are essential for success in this course (and any other math course.):**

1. Attend class every day. Your instructor attempts to find a way to present and illustrate that material to make it understandable. You will have the opportunity to ask questions about points that are not clear and to hear responses to questions raised by other students.
2. Do the work. You should not expect to pass this course without understanding and solving completely and accurately many problems. It is no more possible to pass this course with a vague understanding of the material than it is to pass a driving test without ever having previously driven an automobile.
3. Don't get behind. If you find you do not understand a concept, make an attempt to immediately clarify it. Mathematics builds on previously learned material and gaps in understanding soon get out of hand.
4. There are two steps in solving problems. First, figure out how to do the problem. This may require lots of scratch paper and time. The next step, is to write the solution up in a logical way that could be understood by a friend with the appropriate background.
5. Stay organized. Keep a calendar or planner with all the due dates of homework, quizzes, exams, etc. This is a good idea to implement with all your classes.

Let's have a fantastic semester!