University of Kentucky
Department of Mathematics
MA 111 Contemporary Mathematics
MWF 10:00 AM - 10:50 AM in CP 220
Fall 2013

Instructor Information:

Instructor: Gene (Drew) Lacy Butcher III
Office: Patterson Office Tower 951
Office Phone: 859-257-6821
Email: drew.butcher@uky.edu
Skype ID: UKYDrewButcher
Office Hours: Monday, Wednesday, Friday: 9:00 am - 10:00 am, POT 951
Monday, Friday: 2:00 pm - 3:00 pm, POT 951
Wednesday: 2:00 pm - 3:00 pm, Mathskeller CB 63

Homework Web Page: http://webwork2.ms.uky.edu/webwork2/ma111-3-7-10/

Textbook: We will be using a free textbook called *Math in Society* Edition 2.2 by David Lippman. The book along with YouTube video tutorials can be found at:

http://www.opentextbookstore.com/mathinsociety/

Grading Scale: The grading follows university standards

A	$90-100$
B	$80-89$
C	$70-79$
D	$60-69$
E	$0-59$

All grades are posted on Blackboard (BB). You should make sure the grade posted on BB matches with your records. A grade maybe disputed within 10 days from being posted to BB, after which the grade is final. Please note: I DO NOT USE BLACKBOARD TO AVERAGE GRADES! JUST TO KEEP RECORDS!

Grading:

3 Exams (15% each)	=	45%
Final (Non-Comp.)	=	15%
Homework	=	15%
Quizzes	=	15%
Project	=	10%
		100%

Exams and Final: There will be three exam during the semester over the first three topics of the semester: voting theory, cryptography, fair division. The final will cover the last topic of the semester, graph theory. Tentatively, the exam/final schedule is:

Exam 1: Voting	September 11
Exam 2: Cryptography	October 23
Exam 3: Fair Division	November 15
Final: Graph Theory	TBD Week of December 16 - 20

All of the exams and the final, will be on a 100 point scale and worth 15% percent of your over all grade.

Homework: All homework assignments are available through WeBWorK. To log into WeBWorK your username is the first part of your uky email and your password is your student ID. For example Jane Doe whose email is Jane.Doe@uky.edu with a student ID of 12345678 has:

Username: Jane.Doe
Password: 12345678

When computing the overall grade, I will take the total homework points earned out of 90% of the total homework points possible. Consequently, your homework average is calculated using the following formula:

$$\text{Homework Average} = 100 * \frac{\text{Total Homework Points Earned}}{0.90*(\text{Total Homework Points Possible})}$$

Quizzes: All quizzes will be announced one class period prior. When scheduled a quiz will be given at the beginning of the class period and will last around 10 minutes. If you come in late and the quiz is still in progress you may take the quiz but will have to hand in the quiz at the end of the quiz time. Any quizzes turned in after time is called will receive no credit.

Each quiz will be worth three points and consist of one question. Two of the three points are received for attendance while the remaining one point is received for a correct answer. At the end of the semester the lowest quiz score is dropped. Consequently, your quiz average is calculated using the following formula:

$$\text{Quiz Average} = 100 * \frac{\text{Total Quiz Points Earned - Lowest Quiz Score}}{3*(\text{Number of Quizzes - 1})}$$

Project: There will be a written project assignment during the semester. The project will be on a 100 point scale and worth 10% percent of your over all grade.

Overall Grade Formula:

$$\text{Overall Grade} = 0.15 * \text{EP} + 0.15 * \text{FP} + 0.15 * \text{HA} + 0.15 * \text{QA} + 0.10 * \text{PP}$$

where,

EP = Exam 1 + Exam 2 + Exam 3
FP = Final Exam Points
HA = Homework Average
QA = Quiz Average
PP = Project Points

Course Goals:

- To expose students to a variety of mathematical topics, many of which they would never see in a traditional algebra-based math class.
- To encourage students to persist in solving problems and to develop an appreciation for the beauty of mathematical solutions.
- 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. In the text we will cover four chapter: voting theory, cryptography, fair division, graph theory. 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 there 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.

Course Help: If you find that you need help in the course, then there are a couple options:

- I look forward to getting to know each of my students so I would encourage you to come see me during office hours (listed above) in POT 951 or email me to set up a time that works with your schedule.
- Additional help can be found from faculty members, graduate students, and undergraduate students available in the Mathskeller, CB 063, Monday through Friday, 9:00 AM - 5:00 PM. More information is available at http://www.mathskeller.com.
- The Study offers peer tutoring from experience undergraduates available in the Kirwan-Blanding Dorm Complex on the third floor of the Commons, Monday through Thursday from 3PM to 10PM, Friday from Noon to 5PM, and Sunday 6PM - 10PM. More information is available at http://www.uky.edu/AE/

Attendance: Come to class! Regular attendance, attentiveness and active participation in class is imperative to your successful completion of this course.

Classroom Behavior: 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 (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 may be asked to leave the class, with all subsequent penalties applied to their grade.

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

Excused Absences: University Senate Rule 5.2.4.2 defines the following as acceptable reasons for excused absences:

1. serious illness;
2. illness or death of family member;
3. university-related trips;
4. major religious holidays;
5. other circumstances your instructor finds to be "reasonable cause for nonattendance".

Be prepared to supply documentation for any absence you want to be counted as excused. Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day for adding a class. It is almost always possible to notify your instructor of an excused absence before class. Students who have excused absences due to University-related trips or major religious holidays must inform the instructor prior to the absence and must complete all work prior to the absence. Students who are ill must inform the instructor of their absence(s) as soon as they return to class and they must provide documentation to demonstrate that the absence(s) was excused. Students who have excused absences due to illness or the death of a family member will be allowed to make up any missed work in a timely manner. These arrangements must be made with the instructor on a case-by-case basis.

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 writing assignments, with the exception of any assignment that is specifically designated as a group assignment.

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. 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 for the course, academic probation, or even expulsion. See sections 6.3.1 and 6.3.2 at

www.uky.edu/StudentAffairs/Code/part2.html

for more information regarding academic integrity.

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 Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 859 257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Suggestions: Constructive suggestions for this course are welcome at any time. I welcome suggestions that will improve the course both this semester and in semesters to come. If you have any concerns, please bring them to my attention first. Further recourse is available through the office of the Department Ombud and the Department Chair. Both the Ombud and the Chair can be reached from the main office in POT 719.