

Math 166-200

Topics in Contemporary Mathematics II

Fall 2013

Instructor: Dr. Janice Epstein, Blocker 641H (for now), 845-3261

Office Hours: Mondays 10:00 – 11:30 and Wednesdays 11:00 – 12:30. Also by appointment.

Email: j-epstein@tamu.edu. Include your full name and class/section number in any email

Webpage: www.math.tamu.edu/~epstein/Math141

Class Meeting Times: TR 9:35 – 10:50A in BLOC 160

Catalog Description:

Math 166: Topics in Contemporary Mathematics II. (3-0). Credit 3. Finite mathematics, matrices, probability and applications. Prerequisites: High school algebra I and II and geometry. Credit will not be given for more than one of MATH 141 and MATH 166.

Learning Objectives: This course is focused on quantitative literacy in mathematics found in everyday life. Upon successful completion of this course, students will be able to:

- Understand and apply the rules of logic and sets.
- Recognize patterns in order to understand the principles of probability and counting and apply these concepts to a variety of problems; for instance, finding the probability of drawing a particular hand from a deck of cards.
- Identify types of random variables and be able to calculate probabilities and statistics for these random variables.
- Apply the concepts of finance to everyday experiences, such as paying off mortgages and saving for retirement.
- Understand matrices and their relationships to applications including solving systems of linear equations and solving problems involving Markov processes and game theory.

Required Materials:

- *Textbook: Applied Finite Mathematics by Tomastik and Epstein.* Online access to the text has been included in your student fees. A hard copy of the book is optional. If you would like to purchase a hard copy of the text look for ISBN: 1133444288 (loose-leaf)
- *Calculator:* A TI-83, TI-84 (Regular, Plus or Silver edition) or the TI-Nspire (non-CAS version) calculator is **REQUIRED** and you must bring your calculator to each class. If you want to use a calculator other than those listed, it may not perform symbolic mathematics and you must have my permission to do so.
- *Texas A&M Student ID:* You must bring your student ID to class with you.

Grading:

Quizzes	15%
Daily Grades (homework, videos, and class activities)	15%
Three In-Class Exams	15% each
Cumulative Final Exam	25%

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

Tentative Exam Schedule:

Exam 1 Chapters L and 1 Thursday, September 19th
Exam 2 Chapters 2 and 3 Thursday, October 17th
Exam 3 Chapters F, 4, and 5 Thursday, November 14th

Final Exam: Friday, December 6th at 12:30P in BLOC 160

Attendance & Make-up Policy: Attendance is required in this class.

No make-up exams or late assignments are possible /accepted without a University-approved excused absence (see the Texas A&M University Student Rules).

An absence for a non-acute medical service or regular check-up does not constitute an excused absence.

To be excused, you must notify me in writing prior to the date of absence, if possible. Consistent with Texas A&M Student Rules, in cases where advance notification is not feasible (e.g. accident, or emergency) the student must provide notification by the end of the second working day after the absence. This notification should include an explanation of why notice could not be sent prior to the class.

For injury or illness too severe or contagious to attend class, you must provide confirmation of a visit to a health care professional affirming date and time of visit. The Texas A&M University Explanatory Statement for Absence from Class form will not be accepted. It is the student's responsibility to schedule a make-up in a timely manner.

Homework: Homework will be both online and written assignments.

Quizzes: In-class quizzes will typically occur once per week.

Extra Help & Preparing for Exams

Office Hours: Please attend office hours for additional one-on-one help.

Week-in-Review: The Week-in-Reviews are review sessions for all Math 166 students once per week to review the topics of the previous week and to provide additional examples. Please see

<http://www.math.tamu.edu/courses/weekinreview.html>

Practice: In addition to the WIR problems, I strongly recommend that you practice extra problems on your own from the book. See the suggested homework list on my webpage.

Help Sessions: Help sessions are an opportunity for you to ask questions and get help with your homework. Students who have previously taken Math 166 lead the help sessions. The schedule is at

<http://www.math.tamu.edu/courses/helpsessions.html>

Copyright:

All exams, printed handouts and/or assignments, and web-materials are protected by U.S. Copyright Laws. No multiple copies can be made without my written permission. No exams or assignments may be shared with anyone outside of the class.

Academic Integrity Statement:

"An Aggie does not lie, cheat, or steal or tolerate those who do."

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System.

For additional information please visit: <http://www.tamu.edu/aggiehonor/>

Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit

<http://disability.tamu.edu>

Tentative Schedule: All changes will be announced in class, on the web, or via e-mail. Since this is an honors course, there will be some adjustments and supplements from the standard Math 166 course.

Week 1	Introduction, Sections L.1 and L.2	Logic
Week 2	Sections 1.1 – 1.4	Sets and Probability
Week 3	Sections 1.5 – 1.7	Probability
Week 4	Review, Exam 1 (Chapters L and 1)	
Week 5	Sections 2.1 and 2.2	Counting
Week 6	Sections 2.3, 2.4, and 3.1	Probability using counting Random variables
Week 7	Sections 3.2 – 3.4	Statistics
Week 8	Review Exam 2 (Chapters 2 and 3)	
Week 9	Sections F.1 – F.3	Finance
Week 10	Sections F.4 and 4.2 – 4.4	Finance Systems of linear equations
Week 11	Sections 5.1 – 5.3	Matrices
Week 12	Review Exam 3 (Chapters F, 4, and 5)	
Week 13	Section M.1 – M.3	Markov chains
Week 14	Sections G.1 and G.2	Game Theory
Week 15	Review	