



MGF1106 (Spr 2019)

MGF1106 Syllabus

Course Description

MGF 1106, Mathematics for Liberal Arts I is a general education/math course which is not intended to prepare you for Precalculus or Calculus. Instead, this course is meant to improve general mathematical reasoning skills and cover topics that are broadly applicable in daily life. This course qualifies for both GenEd and Gordon Rule credits.

Instructor Information

Name: Dr. Ross Ptacek

Office: LIT 442

Office Hours by appointment (at least 24h in advance)

Email: rptacek@ufl.edu

Phone: 352-294-2350 (Math Department)

Prerequisites: None

Credits: 3

Course Content Overview: Voting methods, Fairness in voting methods, Weighted voting, Fair division, Apportionment, Sampling, Data Representation, Probability, The Normal Distribution, Symmetry, and Fractal Geometry

This is an **ONLINE COURSE** – all content is delivered online. Students view lectures for each module online, complete online homework and quizzes using the publishers' software MyMathLab. The Three Unit Exams are also completed in MyMathLab but are administered using Proctor U. The course management system used for this class is Canvas.

The course is divided into three units as follows:

1. **Unit 1: The Mathematics of Social Choice.** We will study methods for Course Organization

carrying out elections, fairly dividing assets, and apportionment (usually seats in a legislature). Emphasis is given to mathematical definitions of fairness in these areas and determining which methods are fair in which way.

2. **Unit 2: The Mathematics of Chance.** This unit covers the mathematics of randomness. This includes randomness in experimental studies, basic probability theory with an emphasis on expectation and risk management, and statistics from the point of view of normal distributions.
3. **Unit 3: The Mathematics of Shape and Form.** In this unit we lay down the mathematical framework for describing symmetry of 2d and some 3d objects. We also consider fractal geometry, a study of the Mandelbrot set (perhaps the most famous fractal of all), and the connection between randomness and fractals.

Course Materials

Textbook

Our textbook is *Excursions in Modern Mathematics, 9th Edition* by Peter Tannenbaum.

The textbook is primarily available as an e-book which **must be purchased using UF All Access**. Instructions for purchasing the textbook are on the home page of our Canvas course.

In order to view the e-book and gain access to the online homework exercises, you must also **sign up for MyMathLab**. Instructions for this process are also available on the Canvas home page.

Other Materials

All other materials will be presented on the module pages on Canvas. The module pages include links to the video lectures and notes. Typically video lectures are narration and annotation of slides, and the notes are the unannotated slides. While the video lectures include many different examples, students are expected to both watch the video and read the textbook for a full treatment of the material.

Coursework

Assignments in this class fall into four categories: Homework, Quiz, Group Work, and Exams. Each of these will be briefly described now.

Homework. Homework assignments are used to reinforce topics covered in the online lectures. A **lecture quiz** (which does not count for points) **must be completed before the homework can be attempted**. Typically 10 points of homework will be assigned per week split across the various sections that we cover. If weeks are short due to exams or holidays fewer points may be assigned. There are a total of **130 homework points**. Of the 130 points 10 come from introductory assignments with no corresponding quiz. Other homework assignments are always **due on Friday**, the same day as the weekly quiz. Homework **must be completed with a score of 70%** in order to attempt that week's quiz. MyMathLab homework assignments may be reattempted up until the last day of class (April 24th at midnight) for full points.

Quizzes. There will be a quiz every week, **always due on Friday**. The quiz covers the same material as

the week's homework. Each quiz is worth 12 points. There will be 13 quizzes but **only the best 10 will be counted** for a total of **120 quiz points**. Students get two attempts at the quiz with the better attempt counting for a grade.

Group Work. Group work is a new element to the class starting with this term. Students will work in small groups (4-5) to answer questions that reinforce the course material and even extend it in new directions. Each group assignment will have its own rubric, but generally half of the points are for discussion and the other half are for correct answers. There will be 6 or 7 group assignments (roughly one every two weeks) which will each count for 24 points, but **only the best 5 will be counted** for a total of **120 group points**.

Exams. Each unit culminates with a 120 point exam. The final exam is also a 120 point exam. Of these four exams, the lowest is dropped for a total of **360 exam points**. Exams are worked in MyMathLab but must be taken with the online proctoring service ProctorU. The exam signup period will typically be 3 days long, but students are strongly encouraged to sign up on the first two days and use the third as a backup in case of technical difficulty. Each exam is preceded by a 5 point review assignment. **All four of these count** regardless of which exam is dropped for a total of **20 review points**.

The final exam period is **Tuesday 4/30 8:00 AM to Thursday 5/2 10:00 PM** (all times EST).

Course Calendar

A tentative weekly schedule can be found here: [MGF1106 Spring 2019 Calendar](#).

Grades

Summarizing the above section, there are a total of 750 points available in the class arranged as follows:

Homework:	130 Points (10 points intro + 120 weekly)
Quizzes:	120 Points (10 quizzes x 12 points with 3 quizzes dropped)
Groupwork:	120 Points (5 assignments x 24 points with 1-2 dropped)
Exams:	360 Points (3 exams x 120 points with 4th exam dropped)
Exam Reviews:	20 Points (4 reviews x 5 points)
Total:	750 Points

Final grades are assigned based on the total points accumulated as shown in the table below.

Passing Grades		Non-Passing Grades	
Letter Grade	Point Range	Letter Grade	Point Range
A	675-750	C-	465-494
A-	645-674	D+	435-464

B+	615-644		D	405-434
B	585-614		D-	375-404
B-	555-584		E	0-374
C+	525-554			
C	495-524			

The grading scheme above will be strictly adhered to. Partial points will **not** be rounded up. The score on dropped assignments will be used to determine whether a grade should be rounded up or not.

Makeup Policy

Any makeup request **must be made prior to the deadline of the assignment** unless an emergency prevents communication. Makeups are only approved in the case of official UF business, religious observances, or personal emergency. Makeups may be denied if the reason for absence was known well ahead of time. Students are expected to work around their extracurricular activities, and an extra day one week just means a fewer day the next week.

Makeups for exams are rarely if ever given. The exam window is three days long, so students should be able to find a suitable time over that period. Students are strongly encouraged to schedule on the first two days and use the third as a makeup day in case of technical issues. Please remember that we drop one of the four exams already, so the makeup policy is a bit strict.

Special Accommodations

Students with disabilities requesting accommodations on homework, quizzes, and exams must first register with the Dean of Students Office. The Dean will provide the student with documentation, which must be turned in to the course coordinator or your instructor **during the first two weeks of the semester**.

Students wishing to use DRC accommodations for discussion quizzes must be present in class on the day of the discussion quiz for the accommodated quiz to be accepted.

Academic Honesty

The University of Florida expects students to be honest in all of their university class work. Please remember to commit yourself to academic honesty with the pledge:

"We, the members of the University of Florida Community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."

The Math Department expects you to follow the academic honesty guidelines. Matters of violations of academic honesty are adjudicated by the Student Honor Code.



© 2019 **University of Florida**, Gainesville, FL 32611; (352) 392-3261. Page Updated: January 3, 2019

This page uses **Google Analytics** ([Google Privacy Policy](#))