

Functions and Modeling
MAT 3503
Fall 2018

Classroom: LIT 125

Instructor: Dr. Konstantina Christododouloupoulou

Office Location: LIT 370

Office Hours: M7, T4, W6 and by appointment.

Open Door Policy: You are welcome to drop by to discuss any aspect of the course, anytime.

All course materials will be posted in e-Learning CANVAS

Meeting Times: MWF 5

Office Phone: (352) 294- 2315

Email: kchristod@ufl.edu

Course content and objectives: We will cover selected topics from: functions and relations, sequences, patterns and mathematical modeling, parametric & polar relations, complex numbers, differential equations. Models. In revisiting secondary mathematics content, prospective mathematics teachers are expected to deepen and broaden function-related mathematical content knowledge from algebra through calculus by exploring relevant topics in an inquiry based learning situations and make connections between college mathematics and secondary school mathematics.

Office Hours: I encourage you to take advantage of my office hours and my **open door** policy. You are welcome to drop by my office to talk about the course anytime I am in my office and my door is open. In addition, I will hold regular office hours for your convenience. If you cannot make my posted hours I will also be happy to set a meeting time that is convenient for the both of us.

Course Web Page: I will update CANVAS regularly with class announcements, assignments, and additional materials. All grades are posted in the Canvas gradebook. You are responsible for verifying that those grades are accurate. **You have one week after a score has been posted to contact me to resolve any grade concerns. We will not consider any grading disputes nor make any grade adjustments at the end of the semester. Be sure to save all original documents in case of grading questions.**

Grading:

Class Participation	10%
The Notebook	10%
Homework	20%
Semester Exams	40%
Final Exam	20%

The following grading scale applies.

A	$\geq 90\%$	C	$\geq 70\%$
A–	$\geq 87\%$	C–	$\geq 67\%$
B+	$\geq 84\%$	D+	$\geq 64\%$
B	$\geq 80\%$	D	$\geq 60\%$
B–	$\geq 77\%$	D–	$\geq 56\%$
C+	$\geq 74\%$	E	$< 56\%$

Homework: I will regularly assign problems to be handed in by each individual. I expect all solutions to be written in full sentences and grammatically correct. Each problem will be graded on the following scale:

5	Correct mathematical solution and very well written
4	Small mathematical errors and/or grammatical errors
3	Contains good ideas, but overall an incorrect mathematical solution
2	Significant mathematical errors
1	Come and see me for help!

If you receive a grade of 3, 2, or 1 on any problem, you may turn that solution in again for an entirely new grade. I will keep only the highest score. Rewrites are due exactly one week from when I return homework. You may work with your peers to prepare problems but you must write up solutions individually. Do not turn in what are essentially Xerox copies of each other's homework. **No late homework will be accepted.**

The Notebook: Mathematicians and scientists all keep a detailed record of their progress on the problems they are working on. They will record this in a notebook or they will keep a file. The Notebook for this course is for recording your work. It can be any kind of binding; spiral, three ring or fixed lab book. Each project should start on a fresh page. When I collect the Notebook, you will turn in the entire notebook. You should take pride in the appearance of your notebook. The grading of your notebook will be done according to the following

Grading Rubric for the Notebook:

Clear labeling of the categories of statements given below.

1. **Title.** This section should include a general description of the problem.
2. **Questions.** To make progress you will need to pose questions, the kind of questions where the answers will lead you to more questions and new ideas.
3. **Conjectures.** What do you think might be true? Say it in a declarative sentence.
4. **Experiments.** Try an example and see if your conjecture is true in the example.
5. **Observations.** Based on the experiments, your observations should confirm or deny a conjecture. Look at your examples with an eye to answering your questions.
6. **Conclusions.** Written as declarative sentences, the conclusions are hopefully true statements.

7. **Critiques.** Perhaps an example is too specific to be helpful, or a conjecture led you in a wrong direction, this is the place to discuss this type of issue.
8. **Explanations.** You should attempt to justify your conclusions.
9. **Narrative flow.** Write in complete sentences, clearly formulating concepts.

Submitted work expectations: Submitted work should be neat, organized, and clearly presented. Homework must be on letter-size paper only and papers with multiple pages should be stapled. Papers not meeting these standards may have the scores reduced or may be returned ungraded.

Participation: You are expected to participate in class discussions. Therefore, *it is absolutely essential that you attend class*. You will be allowed 3 absences with no penalty. After this point, I reserve the right to drop your Participation grade by 10% for each additional absence. Excused absences are consistent with university policies in the undergraduate catalog <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> and require appropriate documentation.

Exams: Two mid-term exams and a final exam are scheduled for this course. The mid-term exams are tentatively scheduled for September 28 and October 31, and the final exam is scheduled for Wednesday, December 12, 10am-noon. **The exams cannot be rescheduled unless you meet the University requirements; see <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>** Absolutely no collaboration on exams is allowed.

Make-up policy: You may arrange to make-up a missed exam for excused absences. Acceptable absences include but are not limited to the following: you are participating in a UF-sponsored event and provide me with documentation at least a week in advance; you were verifiably ill during the exam and notified me within 24 hours of its conclusion; you are observing a religious holiday and have notified me of this during the first two weeks of classes; you have a court-ordered obligation and have provided me documentation a week in advance. Please note that "I just didn't feel well" without documentation, travel plans, and personal schedule conflicts are NOT excused.

Class guidelines: It is expected that everyone in our class will act in a respectful manner:

- Please be respectful of your classmates and me while in class or office hours.
- I expect that you are committed to learning and will not miss class. Arriving late (after we have started class) or leaving early is disruptive and disrespectful. If however, you cannot avoid it, please arrange it in advance with me.
- Turn off all cell phones before the start of class.
- Laptops are not to be used in class.

Students with learning disabilities: Students requesting class and exam accommodations must first register with the Dean of Students Office Disability Resource Center(DRC), www.dso.ufl.edu/drc/. That office will provide a documentation letter to the student to present to the instructor, Dr. Christodouloupoulou in Little 370. This must be done as early as possible in the semester, **at least 7 business days before the first exam**, so there is adequate time to make proper accommodations.

Academic honesty: Remember that you committed yourself to academic honesty when you registered at the University of Florida. All students are bound to

The Honor 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 by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied:

"On my honor, I have neither given nor received unauthorized aid in doing this assignment."

Academic Honesty Guidelines: "All students are required to abide by the Academic Honesty Guidelines which have been accepted by the University. The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust, and respect. Students are expected to pursue knowledge with integrity. Exhibiting honesty in academic pursuits and reporting violations of the Academic Honesty Guidelines will encourage others to act with integrity. Violations of the Academic Honesty Guidelines shall result in judicial action and a student being subject to the sanctions in paragraph XIV of the Student Code of Conduct."

In addition, we remind you that *lectures and the course materials given in this class are the property of the University/faculty member and may not be taped/shared without prior permission from the lecturer and may not be used for any commercial purpose. Students found to be in violation may be subject to discipline under the Student Conduct Code.*

ONLINE COURSE EVALUATION

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>.

Tips for the Course:

- *Mathematics is not a spectator sport.* Your participation and engagement with the material is essential.
- Discuss the topics with your classmates.
- Take advantage of my office hours. This time is set aside for us to help you.
- Don't hesitate to ask questions in class.
- Be reminded that 2 student hours devoted to assignments and preparation for every hour of classroom time is a reasonable expectation for an average student.
- Barring unforeseen medical or other serious conditions, I expect you to be in class on time every day. If you must miss a class, please let me know as soon as possible and be sure to contact a classmate to find out what you missed.
- If you are in trouble see me immediately. If you think you are in danger of failing (or of getting a grade that you do not want) you should see me immediately. I will not give you an extra credit assignment or an incomplete to help you avoid failing, but I can make recommendations regarding drops, study habits, test taking skills, future courses, etc.

Counseling and Wellness Center Contact information for the Counseling and Wellness Center:

<http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

This syllabus is subject to change. You will be notified if any changes are made.

Version 1