

**History of Mathematics**  
**MAT 4930**  
**SPRING 19**

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**Classroom:** LIT 205

**Instructor:** Dr. Konstantina Christododouloupoulou

**Office Location:** 370 LIT

**Office Hours:** T5, W7, R6, 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** <https://lss.at.ufl.edu>

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**Meeting Times:** MWF 4

**Office Phone:** (352) 294- 2315

**Email:** [kchristod@ufl.edu](mailto:kchristod@ufl.edu)

**Text:** *A History of Mathematics, An Introduction* by Victor J. Katz, 3rd edition. We will cover selected topics from Chapters 1-16, plus additional material, time permitting.

In addition, we will use the following online resource (browse to become familiar with the many biographies and mathematics topics available at this website):

The MacTutor History of Mathematics Archives (University of St Andrews)

**Course content and objectives:** The goal is to expose students to the historical development of mathematical ideas, over time and across cultures, and to acquaint them with some of the basic techniques, as they were historically developed. We will emphasize primarily the mathematics that influenced the development of algebra, geometry, trigonometry, calculus, and (if time permits) we will look into selected topics from contemporary mathematics.

**Reading:** A tentative course calendar (subject to revision during the semester) and the required readings is available in the course homepage in CANVAS. There you can find which sections will be covered during each lecture. *It is expected that you have read the relevant readings before each lecture, so that you will be able to better grasp the material presented.*

**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, homework 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:**

<b>In Class Activities</b>	10%
<b>Homework</b>	25%
<b>Research Presentation</b>	10%
<b>Midterm</b>	25%
<b>Final Exam</b>	30%

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:** Homework will be assigned regularly and it will consist of reading assignments and mathematical exercises. It is expected that you complete the reading assignments by the next class meeting (unless otherwise specified). In the exercises you will be asked to solve problems using methods or notation of historical periods. Each proof or problem will be graded on the following scale:

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

**If you receive a grade 3, 2, or 1 on any proof, you may turn that proof 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.**

**Submitted work expectations:** Submitted assignments 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.

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.

**Research Presentation:** Besides lectures, part of the course will be devoted to presentations of selected topics by participants. You will select, research, and present a topic of your choice. Your presentation will be a 15 to 20 minute class presentation and you may work in groups of up to 3 members.

**Exams:** A midterm exam and a cumulative final exam are scheduled for this course. The mid-term exam is tentatively scheduled for in class, and the final exam is scheduled for Thursday, May 2, 10:00AM-12:00PM. Both exams will have a mixture of mathematical exercises and short answer historical questions. **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/](http://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.*

## 6. 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**

## SPRING 2019 –MAT 4930 History of Mathematics Calendar

The actual pace of the course may be slightly different than listed in the syllabus below. It will depend on the students' response to the material. Individual homework assignments and in- class group-work will be given every week. **Please check CANVAS for updates on a weekly basis.**

	<b>Topic</b>
<b>Week 1</b>	Overview of the history of mathematics The history of numerals The history of zero
<b>Week 2</b>	Babylonian mathematics Egyptian mathematics
<b>Week 3</b>	Early Greek mathematics Euclid's <i>Elements</i> : Geometry Euclid's <i>Elements</i> : Number theory
<b>Week 4</b>	Late Greek Mathematics
<b>Week 5</b>	Greek mathematics after Archimedes
<b>Week 6</b>	Islamic Math
<b>Week 7</b>	Catch-up/Review/Midterm Exam
<b>Week 8</b>	Medieval Mathematics Algebra in the Renaissance The quintic equation and group theory: Abel and Galois
<b>Week 9</b>	<b>HAPPY SPRING BREAK</b>
<b>Week 10</b>	The invention of Calculus in the 1600s
<b>Week 11</b>	Calculus: Newton, Leibniz Calculus, Algebra & Number Theory in the 1700s.
<b>Week 12</b>	Euler and his legacy
<b>Week 13</b>	From Gauss to Cantor Overview of 19 century mathematics
<b>Week 14</b>	The foundations of mathematics: Cantor, Hilbert, Russell, Goedel
<b>Week 15</b>	A brief look at today's mathematics. Review/Catch-up/Class Presentations
<b>Week 16</b>	Class Presentations