MATH 181

HISTORY OF MATHEMATICS

Summer 2021 - Session 2

Course Description: A survey from a historical point of view of various developments in mathematics. Specific topics and periods to vary yearly.

Prerequisites: Math 19B / Math 20B; Math 100 is strongly recommended for preparation.

Main Textbook:

- David Burton, *The History of Mathematics: An Introduction*, 7th Edition, 2011.

Other References:

- Carl Boyer and Uta Merzbach, *A History of Mathematics*, 3rd Edition, 2011.
- John Stillwell, *Mathematics and Its History*, 3rd Edition, 2010.
- Howard Eves, *An Introduction to the History of Mathematics*, 6th Edition, 1990.

Lecture Time and Location: MoWeFr 1:00PM - 3:30PM, at:

https://ucsc.zoom.us/j/94742601144?pwd=UmVxclIrME1rUlF4WmQxY1ZmcWQ2Zz09

Class Dates: July 26, 2021 - August 27, 2021

The course is hosted on Canvas. You do not need to sign up for an account. Login with your CruzID and Gold Password at canvas[dot]ucsc[dot]edu. See Canvas Getting Started Student Guide.

Instructor: John Pelias
Instructor's E-mail: jppelias[at]ucsc[dot]edu
Instructor's Office Hours and Location: MoWe 3:30PM - 4:30PM at:

https://ucsc.zoom.us/j/94742601144?pwd=UmVxclIrME1rUlF4WmQxY1ZmcWQ2Zz09

Reader: Trang Tran
Reader's E-mail: ttran109[at]ucsc[dot]edu

Grading:
60% Homeworks
20% Quizzes
20% Final Exam

Homeworks: There will be 5 group homeworks, each of which you will submit as a group on or before every Friday.
Quizzes: There will be 5 quizzes, 10 points each, hosted on Canvas and to be taken individually each Saturday.
Final Exam: There will be a Final Exam, hosted on Canvas and to be taken individually on **August 30, 2021 (Monday)**.
Late/Makeup Policy: I will neither accept late homework nor give makeup quizzes/exams.

Tentative Schedule: (subject to change, based on actual progress of the class)

Content	Week
1: Early Number Systems and Symbols **2: Mathematics in Early Civilizations** **3: The Beginnings of Greek Mathematics**	1
4: The Alexandrian School: Euclid **5: The Twilight of Greek Mathematics: Diophantus** **6: The First Awakening: Fibonacci**	2
7: The Renaissance of Mathematics: Cardan and Tartaglia **8: The Mechanical World: Descartes and Newton**	3
9: The Development of Probability Theory: Pascal, Bernoulli, and Laplace **10: The Revival of Number Theory: Fermat, Euler, and Gauss** **11: Nineteenth-Century Contributions: Lobachevsky to Hilbert**	4
12: Transition to the Twentieth Century: Cantor and Kronecker **13: Extensions and Generalizations: Hardy, Hausdorff, and Noether**	5

Important Deadlines:

Drop: August 02, 2021 (Mon)
Request "W" (Withdraw) Grade: August 13, 2021 (Fri)
Change in Grading Option: August 13, 2021 (Fri)

DRC Remote Accommodations

The Disability Resources Center reduces barriers to inclusion and full participation for students with disabilities by providing support to individually determine reasonable academic accommodations. Operations continue via remote appointments. If you have questions or concerns about exam accommodations or any other disability-related matter, email the DRC Schedulers at drc@ucsc.edu for an appointment.

Academic Dishonesty

Academic integrity is the cornerstone of a university education. Academic dishonesty diminishes the university as an institution and all members of the university community. It tarnishes the value of a UCSC degree. All members of the UCSC community have an explicit responsibility to foster an environment of trust, honesty, fairness, respect, and responsibility. All members of the university community are expected to present as their original work only that which is truly their own. All members of the community are expected to report observed instances of cheating, plagiarism, and other forms of academic dishonesty in order to ensure that the integrity of scholarship is valued and preserved at UCSC.

In the event a student is found in violation of the UCSC Academic Integrity policy, he or she may face both academic sanctions imposed by the instructor of record and disciplinary sanctions imposed either by the provost of his or her college or the Academic Tribunal convened to hear the case. Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student?s transcript.

For the full policy and disciplinary procedures on academic dishonesty, students and instructors should refer to the Academic Integrity page at the Division of Undergraduate Education.

Title IX

The university cherishes the free and open exchange of ideas and enlargement of knowledge. To maintain this freedom and openness requires objectivity, mutual trust, and confidence; it requires the absence of coercion, intimidation, or exploitation. The principal responsibility for maintaining these conditions must rest upon those members of the university community who exercise most authority and leadership: faculty, managers, and supervisors.

The university has therefore instituted a number of measures designed to protect its community from sex discrimination, sexual harassment, sexual violence, and other related prohibited conduct. Information about the Title IX Office, the online reporting link, applicable campus resources, reporting responsibilities, the UC Policy on Sexual Violence and Sexual Harassment and the UC Santa Cruz Procedures for Reporting and Responding to Reports of Sexual Violence and Sexual Harassment can be found at titleix.ucsc.edu.

The Title IX Office is actively responding to reports and requests for consultation. If you are not currently working with someone in the office and want to make a report/request a consult, you can expect the fastest response by using our online reporting link.

For more information please visit the Title IX Operations under Covid-19 page.