MATH 100 Syllabus
Summer 2020

Instructor: Nathan Marianovsky (nmariano@ucsc.edu)

Lectures: MWF 10:00am - 12:30pm via Zoom

Instructor Office Hours: Tuesdays 11:00am - 12:00pm, Wednesdays 1:00pm - 2:00pm & Thursdays 9:00am - 10:00am via Zoom (also by appointment)

Sections: Tuesdays 9:00am - 10:00pm & Wednesdays 9:00am - 10:00am

TA: Brandon Owens (browens@ucsc.edu)

TA Office Hours: Mondays 9:00am - 10:00pm & Tuesdays 10:00am - 11:00am

Primary Text: Book of Proof by Richard H. Hammack

Tentative Course Outline

- **Lecture 01**: Sets (§1.1 - 1.4)
- **Lecture 02**: Sets (§1.5 - 1.10)
- **Lecture 03**: Logic (§2.1 - 2.5)
- **Lecture 04**: Logic (§2.6 - 2.12), Counting (§3.1)
- **Lecture 05**: Counting (§3.2 - 3.4)
- **Lecture 06**: Counting (§3.5 - 3.9)
- **Lecture 07**: Counting (§3.10), Direct Proof (§4.1 - 4.5), Contrapositive Proof (§5.1)
- **Lecture 08**: Contrapositive Proof (§5.2 - 5.3), Proof by Contradiction (§6.1 - 6.4)
- **Lecture 09**: Proving Non-Conditional Statements (§7.1 - 7.4), Proofs Involving Sets (§8.1)
- **Lecture 10**: Proofs Involving Sets (§8.2 - 8.3), Disproof (§9.1 - 9.3), Mathematical Induction (§10.1)
- **Lecture 11**: Mathematical Induction (§10.2 - 10.5), Relations (§11.1)
- **Lecture 12**: Relations (§11.2 - 11.6), Functions (§12.1)
- **Lecture 13**: Functions (§12.2 - 12.6)
- **Lecture 14**: Cardinality of Sets (§14.1 - 14.4), Zermelo-Fraenkel Axioms
- **Lecture 15**: Axioms of Choice, Gödel’s Incompleteness Theorems
Section Policy: Sections are optional and are run according to the TA’s preferences.

Homework Policy: Every week you will be assigned a set of questions that will be due on Fridays at 11:59pm. The homework is to be submitted through canvas.

Piazza: We will be using the free, online question-and-answer platform Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates, the TA, and myself. I encourage you to ask questions when you are struggling to understand a concept (you can even do so anonymously).

Grading Policy:
- Homework: 40%
- Writing Assignment I: 20%
- Writing Assignment II: 40%

ProctorU Policy: This course will not be using ProctorU.

Curving Policy: The final grades may be curved, if necessary.

Important Dates:
- Start Date: Monday, July 27th
- Drop Date: Monday, August 3rd
- Request for "W": Friday, August 14th
- End Date: Friday, August 28th

A Comment on the Above: Neither Summer Session nor instructors drop students for non-attendance or non-payment. Students must drop themselves. Dropping results in full tuition reversal/refund. Withdraw posts a W for the grade and full tuition is charged (no refund). For all dates and deadlines, including ‘change of grade option’ (P/NP) and grades due, here is the summer academic calendar: [https://summer.ucsc.edu/studentlife/index.html](https://summer.ucsc.edu/studentlife/index.html). For questions about dropping, requesting a W grade for a course, or withdrawing from the summer quarter, email summer@ucsc.edu.

DRC 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. If you have questions or concerns about exam accommodations or any other disability-related matter, please contact the DRC office, located in Hahn 125 or at 831-459-2089 or drc@ucsc.edu.

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](https://undergrad.ucsc.edu/academic-integrity) 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/Sexual Harassment Office is located at 105 Kerr Hall. In addition to the online reporting option, you can contact the Title IX Office by calling 831-459-2462.