

Modern Algebra 1

MATH 110A – Spring 2019

👤 Dr. Joshua Wiscons (he/him/his)
📍 Brighton (BRH) 144
🕒 **T, Th** 9:30AM–10:30PM; **W** 1:00PM–2:00PM
And also by appointment
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📄 webpages.csus.edu/wiscons/teaching/

📖 **Catalog Description.** First half of a one-year introductory course in algebraic concepts. Topics include: groups, subgroups, properties of groups, permutation groups, factor groups, homomorphism theorems.

✔ **Prerequisites.** Math 108 (Intro. to Formal Math).

📖 **Book.** We will use a *modified* version of the open-source book *An Inquiry-Based Approach to Abstract Algebra*, by [Dana C. Ernst](#). The book will be posted on our course website at

webpages.csus.edu/wiscons/teaching/math110A_s19.html

⚙️ **Learning Outcomes** In this course, students will (1) increase their capacity for critical thinking and fact-based reasoning, (2) develop the necessary competency with group theory for further work in mathematics and other fields, (3) improve their written and oral communication of mathematics, and (4) develop the skills and mindset for solving problems in a team.

📅 **Typical Day.** A typical class meeting will consist of group work, discussion, and student presentations.

🗣️ **Class Etiquette.** Diversity and individual differences are respected, appreciated, and recognized as a source of strength. Students in this class are encouraged and expected to *speak up* and participate during class and to *step back* and include others in the conversation. Every member of this class must show respect for every other member of this class. Attitudes or actions destructive to the sense of community that we strive to create are not welcome and will not be tolerated. Also, please arrive on time; if you can't, please send me an email.

Course Components

Homework. Homework will *usually* be assigned each class meeting, due at the next meeting. You are *allowed and encouraged* to work together, but you are expected to **write up your solutions on your own**. All assignments should be **carefully, clearly, and cleanly written**, including proper grammar, punctuation, and spelling. These assignments will be graded on a ✓-system.

On each assignment, you are **required** to clearly reference all outside resources¹ that you used, or write “no outside resources used.” This is very important!

My hope is that you do not use outside resources—this will have the most benefit for you. A ✓⁺ will not be given when outside resources are used, and heavy use of these may further lower grades.

Presentation and Participation. Learning to discuss mathematics is a highly valued part of this course. This component will evaluate your progress in areas such as ability to describe a solution (with clarity and thoughtfulness), ability to share and shed light on your difficulties, and ability to listen critically and respond accordingly. *The best way to excel in this component is to be engaged with your group each day, active in class-wide discussions, and prepared to present at the board.* Repeated absences will impact this portion of your grade.

Presentation Rubric

E	EXCEEDS EXPECTATIONS. Thorough and detailed solution; exceptionally clear and thoughtful presentation.
M	MEETS EXPECTATIONS. Well-thought out approach capturing the key ideas; clear presentation.
I	IN PROGRESS. Serious attempt, but has a significant flaw/gap or lack of clarity.
U	UNSATISFACTORY. Minimal or no progress was made.

¹The following are **not** considered outside resources: your classmates, me, our book (by [Dana](#)).

Participation Rubric

E	EXCEEDS EXPECTATIONS. Always engaged, supportive of your classmates, and eagerly contributing to meaningful class discussions (while including everyone). Essentially always attends class.
M	MEETS EXPECTATIONS. Consistently engaged, respectful, and attempting to contribute to meaningful class discussions. In addition, the student regularly attends class.
U	UNSATISFACTORY. Often disengaged or disrespectful or frequently absent.

Overall

90–100%	Receives M/E for participation; has at least 3 M/E presentations prior to each midterm.
80–89%	Receives M/E for participation; has at least 2 M/E presentations prior to each midterm.
70–79%	Receives M/E for participation; has at least 1 I/M/E presentation prior to each midterm.
60–69%	Receives U for participation; has at least 1 I/M/E presentations over semester.
< 60%	Receives U for participation; never presents or all receive a U.

Writing Assignments. These will be due most **Sundays** by 7PM and must be typed up with \LaTeX . Becoming proficient with \LaTeX is one of the aims of the course—I will support you as much as needed with this.

Take great care not to plagiarize or allow your own work to be plagiarized.


Exams. There are 2 midterm exams *tentatively* scheduled for Mar. 7 and Apr. 25. There is also a Final Exam scheduled for Thursday, May 16 from 10:15AM–12:15PM.

Grade Composition

Homework	12.5%	
Writing Assignments	12.5%	
Discussion and Participation	15%	
Midterm Exams	40%	(20% × 2)
Final Exam	20%	

In general, letter-grades cutoffs will be standard: A 100–90%, B 89–80%, C 79–70%, D 69–60%, F 59–0%.

Accommodations. Any student needing academic adjustments or accommodations should speak with me privately as soon as possible. If you have one, please bring a copy of your accommodation letter from the [Services to Students with Disabilities \(SSWD\) office](#) (www.csus.edu/sswd/). All discussions will remain confidential.

 **Focus on Writing** Mathematics is deeply concerned with asking questions, solving problems, generalizing existing results, and uncovering new connections, but the end product is always a precise, concise, and thorough article. An “advance” in mathematics is not worth much until others believe and understand it. One major goal of this course is to improve the students’ ability to write logically precise, well-structured, and well-justified mathematics. Supplementing this goal, the course aims to build proficiently in typesetting mathematics with \LaTeX .

We will discuss these issues both in and outside of the classroom, and you are strongly encouraged to solicit feedback from me on your rough drafts. Revisions to your final drafts will be by invitation only.

Getting Extra Help Try hard! . . . but don’t be surprised if that is not always enough. *Please come talk with me!* Talk with your classmates too.

Cheating Cheating will result in disciplinary action and will be reported to the [Office of Student Conduct](#). If you are unsure what constitutes cheating, please speak with me and review Sacramento State’s *Academic Honesty Policy and Procedures* document here: www.csus.edu/umannual/student/stu-0100.htm.

(SOME) CAMPUS RESOURCES

Basic Needs Support. If you are experiencing challenges in the area of food and/or stable housing, help is just a click, email or phone call away! Sacramento State offers basic needs support for students who are experiencing challenges in these areas. Learn more about your options and resources here: www.csus.edu/basicneeds/

Centers for Diversity and Inclusion. We have a family of Centers,

- Women's Resource Center,
- Multi-Cultural Center, and
- PRIDE Center,

that provide students with validation and support, while also engaging the larger Hornet community in coordinated efforts to interrogate and explore identity, promote cultural pluralism, and contribute to social justice. Check them out here: www.csus.edu/cdi/

College Assistance Migrant Program (CAMP). CAMP is designed to help students from migrant and seasonal farm worker backgrounds succeed at Sacramento State. CAMP facilitates transition from high school to college and offers first-year support services to develop the skills necessary to persist and graduate from college. CAMP strives to be "a home away from home" for its students. More here: www.csus.edu/camp/

Counseling Services. Confidential counseling services are available on campus for Sacramento State students. Counselors are located on the second floor of the WELL. Appointments can be made 8:00AM–5:00PM, Monday–Friday. Call 916-278-6461 to make an appointment. **If you are in immediate crisis, please call 9-1-1 or the Suicide Hotline at 1-800-273-TALK (8255).**

Dreamer Resource Center (DRC). The DRC's mission is to make the dream of a college degree a reality for undocumented students and students with mixed-status families at Sacramento State by helping students overcome the unique challenges that get in the way of achieving academic, personal and professional excellence. Learn more here: www.csus.edu/saseep/drc/

Full Circle Project (FCP). The FCP aims to provide a student-centered approach to steadily increase the graduation rates of underrepresented Asian American and Pacific Islander (AAPI) and other high-need students through rigorous coursework, academic support, intentional student organization and leadership opportunities, career planning and meaningful community engagement. Lot's more info here: www.csus.edu/fcp/

MLK Scholars. The MLK Scholar's program is designed to support and ensure the success of African American students or those with an interest in African American heritage in their quest toward a degree at Sacramento State. Learn more here: www.csus.edu/saseep/mlk/

Peer & Academic Resource Center (PARC). PARC provides **free** peer tutoring, advising, and supplemental instruction. For more information or to make an appointment, go here: www.csus.edu/parc/

Serna Center. The Serna Center's mission is to promote, foster, and enhance self-advocacy, empowerment and leadership among Chicanxs/Latinxs students and students from other under-represented backgrounds at Sacramento State. Learn more here: www.csus.edu/sernacenter/

Services to Students with Disabilities (SSWD). SSWD offers a wide range of support services and accommodations for students in order to ensure students with disabilities have equal access and opportunity to pursue their educational goals. More info here: www.csus.edu/sswd/

Sexual Misconduct. We have a confidential support advocate on campus to assist students who have experienced sexual assault, intimate partner violence, sexual harassment, and stalking. To set up an appointment with the advocate, call 916-278-5850 or schedule an appointment online through your patient portal.

If you are in immediate danger or need immediate assistance, please call 9-1-1 or if you are on campus, campus police at 916-278-6000. If it is after hours or the weekend and you need immediate advocacy, please call WEAVE's 24-hour hotline at 916-920-2952.