Instructor: Dr. Tim Hsu (pronounced "shoe").

Office and phone: MacQuarrie Hall 316, (408)924-5071.

Office hours: By Zoom, TW 1:30–2:30pm.

E-mail: `tim.hsu@sjsu.edu`. I can be reached by e-mail at many times of the day, and will try to respond within 48 hours.

Course web page: `http://www.timhsu.net/courses/221b/`

Text: *Algebra*, Michael Artin, 2nd ed. (2018). Other reading may be assigned later in the semester, but that reading will all be available for free.

Grading: Your semester grade consists of: Homework 20%; Exam 1 14%; Exams 2 and 3 18% each; Final exam 30%.

Goals of this course. The primary goal of this class is for you to learn selected topics from graduate-level algebra, starting with the fundamentals of ring theory. Specific topics will probably include ring theory, factorization, ideals and number fields, field extensions, and Galois theory.

The secondary goal of this class is that each of you will learn the algebraic background needed to work on a thesis with an SJSU faculty member. Consequently, each unit in the course will be modeled around a thesis topic that you might work on.

Homework. Homework will be due roughly once a week, with problem set 01 due **Mon Feb 06**. Specific homework assignments will be determined as the term progresses. For a complete list of all homework assigned to date, and downloadable versions of almost all handouts from class, you can always check the course web page.

Problem sessions. In addition to my regular office hours, starting on **Fri Feb 03**, I will also hold problem sessions for this class every **Fri**, from **12:30–2:30pm**, by Zoom. These sessions are completely optional, and you should be fine without them, but the time is available for those who can make it.

Exams. We will discuss this topic in more detail before the first exam, but briefly, the material on exams will mostly resemble the material from the homework. All exams are closed-book. You will not be allowed to use calculators for any in-class exams.

Exam dates. The dates of our three in-class exams and final exam are found on the syllabus below. In particular, the final exam will be a take-home exam

How to add this course. If you are not registered for this course, and you would like to add it, you must first put a full effort into completing all of the work in the course. Second, if you are a graduating senior, you need to produce documentation to verify that.

I'll make a waiting list, which you get on by filling out and turning in the information form for the course. I'll give out add codes starting **Mon Feb 13** (or possibly earlier), mainly based on completeness of homework, and as long as there is room, I will continue to give out add codes until add date (**Mon Feb 20**). Note, however, that graduating seniors have the highest priority, and that Open University students have the lowest priority.

How to drop this course. Until **Mon Feb 20**, you can drop at `my.sjsu.edu`. Nothing will appear on your transcript, but please let me know if you drop.

To drop after Mon Feb 20, you must go to the student services center and submit a Course Drop form to the Director of Academic Services. Dropping under these circumstances is only allowed for "serious and compelling reasons" (course catalog). A low grade is not a serious and compelling reason.

Academic integrity. Your commitment to learning (as shown by your enrollment at SJSU) and SJSU's Academic Integrity Policy require you to be honest in all of your academic

course work. Faculty are required to report all infractions to the Office of Student Conduct and Ethical Development. See: www.sjsu.edu/studentconduct

Disabilities. If you need course adaptations or accommodations due to a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities register with the Accessible Education Center (formerly the Disability Resources Center) to establish a record of their disability.

Tentative syllabus

All reading is from Artin; x.y denotes Chapter x, Section y.

Date	Activity	Date	Activity
		Mon Mar 27	**SPRING BREAK**
Wed Jan 25	11.1–11.2	Wed Mar 29	**NO CLASSES**
Mon Jan 30	11.3	Mon Apr 03	15.6
Wed Feb 01	11.4–11.5	Wed Apr 05	15.7–15.8
Mon Feb 06	11.5–11.6	Mon Apr 10	16.1–16.2
Wed Feb 08	11.7–11.8, 12.1–12.2	Wed Apr 12	16.3–16.4
Mon Feb 13	12.2–12.3	Mon Apr 17	16.5–16.6
Wed Feb 15	12.3–12.4	Wed Apr 19	16.7
Mon Feb 20	12.5, 13.1	Mon Apr 24	16.8
Wed Feb 22	**Exam 1**	Wed Apr 26	16.9
Mon Feb 27	13.2–13.3	Mon May 01	**Exam 3**
Wed Mar 01	13.4	Wed May 03	16.10
Mon Mar 06	13.5–13.6	Mon May 08	16.11
Wed Mar 08	13.6–13.7	Wed May 10	16.12
Mon Mar 13	13.7–13.8	Mon May 15	TBA
Wed Mar 15	15.1–15.2		
Mon Mar 20	15.3–15.4	**Finals week**	**Final exam,**
Wed Mar 22	**Exam 2**		**take-home**