Topics in Commutative Algebra, Math 7830  
University of Utah, Spring 2021  
Anurag K. Singh

Class  Tuesday and Thursday, 2:00 pm – 3:20 pm, online synchronous, via Zoom.

Contact  LCB 124, (801) 581-8647, singh@math.utah.edu, with e-mail preferred.

Format  The class will be delivered *synchronously*, i.e., live at the time listed, via Zoom. It is strongly suggested that you have a webcam and microphone to fully participate. A version of this syllabus is available on the Canvas page for the course, with Zoom links, passwords, etc.

Syllabus  The course will focus on the invariant theory of finite groups; for the most part, it should be accessible to anyone who has completed the graduate algebra sequence, though it certainly helps to have had a first course in commutative algebra. While I will not follow any one source, here are some references:


  While I will typically lecture during the class period, I also hope to make the class as interactive as possible. I strongly encourage questions, and am always happy to go over more examples to illustrate the topics at hand. If possible, keep your video on with your microphone muted so as to eliminate background noise, but feel completely free to unmute for questions/clarifications, or to join a discussion. When speaking, please turn on your video if possible, if it wasn’t already on.

  The pdf of the lectures will be available on Canvas, along with class recordings. Because of this, please refrain from giving out any sensitive personal information during class time.
Resources and Policies

ADA Statement: The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability & Access, 162 Olpin Union Building, (801) 581-5020. CDA will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability & Access.

Addressing Sexual Misconduct: Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran’s status, or genetic information. If you or someone you know has been harassed or assaulted on the basis of your sex, including sexual orientation or gender identity/expression, you are encouraged to report it to the University’s Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, (801) 581-8365, or to the Office of the Dean of Students, 270 Union Building, (801) 581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 Student Services Building, (801) 581-7776. To report to police, contact the Department of Public Safety, (801) 585-2677.

Campus Safety: The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at (801) 585-2677. You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit https://safeu.utah.edu.

Student Names and Personal Pronouns: Class rosters are provided to the instructor with the student’s legal name as well as preferred first name, if previously entered by you in the Student Profile section of your CIS account; this can be managed online by you at any time. I will refer to you with the name and the pronoun that you prefer, in class or on assignments; please advise me of any changes or preferences. For assistance or support, please reach out to the LGBT Resource Center, https://lgbt.utah.edu.

Diversity and Inclusivity: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students’ learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally, or for others. In addition, if any of our class meetings conflict with your religious events, please let me know so that I can make alternative arrangements for you.

Undocumented Student Support Statement: Immigration is a complex phenomenon with broad impact on those who are directly affected by it, as well as those who are indirectly affected by their relationships with family members, friends, and loved ones. If your immigration status presents obstacles to engaging in specific activities or fulfilling specific course criteria, confidential arrangements may be requested from the Dream Center. Arrangements with the Dream Center will not jeopardize your student status, your financial aid, or any other part of your residence. The Dream Center offers a wide range of resources to support undocumented students (with and without DACA) as well as students from mixed-status families. To learn more, please contact the Dream Center at (801) 213-3697 or https://dream.utah.edu.

Wellness Statement: Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student’s ability to succeed and thrive at the University. For helpful resources, contact the Center for Student Wellness at (801) 581-7776 or https://www.wellness.utah.edu.