

**PRACTICAL INFORMATION**

Class time: TR 2:00–3:20 pm  
Class room: MATH 109  
Instructor: Lars Winther Christensen  
Office: WEEKS 347  
Office hours: W 1–3 pm, R 3.30–5 pm, or by appointment  
E-mail: [lars.w.christensen@ttu.edu](mailto:lars.w.christensen@ttu.edu)  
Homepage: [www.math.ttu.edu/~lchrste/teaching.html](http://www.math.ttu.edu/~lchrste/teaching.html)

**COURSE DESCRIPTION**

This course is a continuation of Math 3360 Foundations of Algebra I.

**Required text:** *Algebra. Pure & Applied* by Papantonopoulou; Pearson (2002).

**Prerequisites:** Math 3360.

**Expected learning outcomes:** Students learn how to think and reason abstractly in the context of algebraic structures and learn how to write correct and clear mathematical arguments in this context. Concepts to be mastered by the students include but are not limited to the following:

- Polynomial rings
- Euclidean domains and factorization
- Field theory
- Group actions and Sylow's theorems
- Galois theory; insolvability of a general quintic equation

**LEARNING ASSESSMENT**

Graded assessment is done through homework and exams. Other assessment techniques will also be used; these include direct questioning, problems to be solved in class, and discussions during office hours. Additionally, problems will be assigned for student self-assessment. The homework problems will focus on the concepts listed above. They will be constructed such that they facilitate the students' development of skills in reasoning about algebraic objects and communicating their thoughts. Exam problems will be constructed such as to test if the students have acquired the expected command of the concepts and developed the expected skills in abstract algebra.

**COURSE ORGANIZATION**

Of the 29 class periods, 26 will be spent on lectures and 3 on exams and feedback. The plan is to cover sections 8.1–8.8 (7 class periods), 9.1–9.3 (4 c.p.), 10.1–10.3 (6 c.p.), 4.4–4.7 (4 c.p.), and 12.1–12.3 (5 c.p.). Exact reading assignments are posted on Blackboard, which is updated after every class.

**Exams:** In-class exams take place on Thursday 6 October and Thursday 17 November. The final exam is on Saturday 10 December, 1:30–4:00 pm.

**Other important dates:**

Last day to drop a course without penalty	12 September
Last day to drop a course	22 November
Last day to withdraw	22 November
Thanksgiving Vacation	23–27 November

**ASSIGNMENTS, GRADES, AND GRADING**

Two in-class exams are given during the semester. Regular homework will be assigned 12 times during the semester. Students are encouraged to work together on the homework problems. Results and grades are posted on Blackboard.

**Grading:** On exams and homework, partial credit for correct steps will be awarded even if the final answer is wrong. Full credit will be given only if the final answer and all intermediate steps are correct. A correct final answer does not *per se* guarantee any credit.

**Deadlines and make ups:** Homework is not accepted after the deadline. Make-up exams are only given if the original exam was missed for a valid, university approved, reason.

**Final grade:** Homework (10 of 12 assignments) and exams (3) are counted towards the final grade with weights as follows: Homework 30% (3% ea.), in-term exams 40% (20% ea.), and final exam 30%.

**GENERAL POLICIES****Academic Integrity, Students with Disabilities, Religious Holy Days, and COVID-19:**

Please see Texas Tech University's required policies  
[www.depts.ttu.edu/tlpc/RequiredSyllabusStatements.php](http://www.depts.ttu.edu/tlpc/RequiredSyllabusStatements.php).

**What to do in case of emergency:** If a student encounters a personal problem that affects their ability to attend class or complete their work on time, they should immediately contact the Dean of Students office via phone (806-742-2984) or email ([deanofstudents@ttu.edu](mailto:deanofstudents@ttu.edu)). The Dean of Students can help with emergencies including COVID, car accidents, death of a family member, inability to afford food, health issues, and more.

In exceptional circumstances, the Dean of Students can authorize exceptions to class policies. That is why it is critically important to immediately inform both your teacher and the Dean of Students office of any emergency. In addition, Title IX reporting and support resources are available at [www.depts.ttu.edu/titleix/](http://www.depts.ttu.edu/titleix/).

**What to do in case of an issue with your teacher:** Should a student encounter an issue in this course, they must follow these steps, in order. 1. First discuss the issue with the teacher. Explaining your concern calmly and clearly will usually resolve the problem. 2. If the issue is not resolved, or the issue is of a matter that the student is not comfortable discussing with the instructor, the student should contact Dr. Brock Williams ([brock.williams@ttu.edu](mailto:brock.williams@ttu.edu)), the Associate Chair for Undergraduate Studies. Do not contact the Dean, Provost, Chancellor, etc, without first following these steps.