

**PRACTICAL INFORMATION**

Class hours: TR 2:00–3:20 pm  
Class room: MATH 015  
Instructor: Lars Winther Christensen  
Office: MATH 251  
Office hours: T 9:00–10:30 am and 3:30–5:00 pm, W 4:00–6:00 pm, and R 9:00–10:30 am,  
or by appointment  
Phone: (806) 742-2580 x 366  
E-mail: lars.w.christensen@ttu.edu  
Course homepage: [www.math.ttu.edu/~lchrste/teaching4360112001.html](http://www.math.ttu.edu/~lchrste/teaching4360112001.html)

**COURSE DESCRIPTION**

This course is a continuation of Math 3360.

**Required text.** “Algebra, Pure & Applied” by Aigli Papantonopoulou, published by Pearson.

**Prerequisites.** Math 3360.

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

- Ideals and quotient rings
- Euclidean domains and factorization
- Field theory
- Group automorphisms and group actions
- Galois theory; insolubility 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 be assigned out of the textbook; they will be chosen such that they facilitate the students’ development of skills in writing mathematical arguments. Exam problems will be constructed such as to test if the students master the concepts and skills listed (●) above.

**COURSE ORGANIZATION**

The plan is to cover (in order) sections 7.3 and 8.6–8.8, chapters 9–10, 4–5, and 12. Precise reading assignments will be posted on the course homepage, which is updated after every class.

**Exams.** In-class exams take place on 24 Feb. and 7 April. The final is on 6 May, 1:30–4:00 pm.

### Other important dates.

Martin Luther King Jr. Day	17 Jan.
Last day to drop a course without penalty	28 Jan.
Spring Vacation	12–20 Mar.
Last day to drop a course	23 Mar.
Last day to withdraw	28 April

### ASSIGNMENTS, GRADES, AND GRADING

The final exam is comprehensive. Two in-class exams are given during the semester. Homework will be assigned 12 times during the semester and is due on Thursdays. Students are encouraged to work on the homework problems in groups. Results and grades are posted at [www.blackboard.ttu.edu](http://www.blackboard.ttu.edu).

**Grading policy.** On exams and written 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 *per se* does not guarantee any credit.

**Deadlines and make ups.** Homework is not accepted after the deadline. In-class exams cannot be made up; the final exam serves as make-up for exams that were missed for legal reasons.

**Final grade.** Homework (10 assignments) and exams (3) are counted towards the final grade with weights as follows: homework 35% (3.5% ea.), in-class exams 40% (20% ea.), and final exam 25%.

### GENERAL POLICIES

**Academic integrity.** It is the aim of the faculty of TTU to foster a spirit of complete honesty and a high standard of integrity. Any attempt of students to present as their own any work that they have not honestly performed is regarded by faculty and administration as a serious offense and renders the offenders liable to serious consequences, possibly suspension. Please see more information on-line at [www.depts.ttu.edu/studentaffairs/CampusCrime/documents/integritymatters.pdf](http://www.depts.ttu.edu/studentaffairs/CampusCrime/documents/integritymatters.pdf).

**Civility in the classroom.** You are expected to be courteous to me and your fellow students. This means that your cell-phone should be turned off during the class; you shall not chat with your friends during class, eat meals or snacks, or cause a distraction in any other way.

**Officially approved trips.** Students are allowed to miss class for trips officially sanctioned by TTU. The student must notify the instructor of upcoming trips and present written authorization.

**Religious holy days.** You are allowed to take the time to travel and observe a religious holy day. Prior notice should be given at least 1 day before the absence.

**Students with disabilities.** Any student who, because of a disability, may require special arrangements in order to meet course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services office at 335 West Hall or 806-742-2405.