

MATH 5360/5361 : Advanced Math for Teachers, Solvability by Radicals
Section 101, M–F 9:00am–2:00pm, MA 115

Course Information:

Instructor: Chris Monico
Email: c.monico@ttu.edu
Office: MA-252
Text: Allan Clark, *Elements of Abstract Algebra*.

Course outline/Important Dates: The text will be used as a reference only, and we will not cover all of it nor even in the same order. The specific topics we will cover are listed below under “expected learning outcomes.”

Last day to drop a course	Tuesday, 6/16/09.
Last day of classes	Tuesday, 6/25/09.

Grading Policy: Your final grade in this course will consist of the following weighted components:

In-class projects:	80%
Quizzes:	20%

In-class projects will be assigned and collected regularly. You will work in groups on these projects, unless otherwise indicated. But it is expected that every person in a group will contribute.

Your final letter grade for this course will be determined as follows.

90–100%	A
80–89%	B
65–79%	C
55–64%	D
0–54%	F

Attendance: Class attendance is *mandatory*. Missing even one class will be difficult to recover from since the material is highly sequential in nature. If you are absent for a class, you will be permitted to make up the work *if and only if* you are absent for one of the following reasons:

- You are out of town performing duties on behalf of the university (i.e., athletics). Advance notification is required.
- Religious holy day (see below).
- Hospitalization (requires verification from the Center for Campus Life).
- Death in the immediate family.
- Other extenuating circumstances, at the instructor’s discretion.

Expected Learning Outcomes Students learn about mathematical structures in the context of Galois Theory and solvability by radicals. The material will be presented in a very example-intensive way. Concepts to be mastered by the students include but are not limited to the following:

- fields and polynomials over a field,
- vector spaces, linear independence, basis, dimension,
- field extensions and subfields, splitting fields,
- field automorphisms,
- groups, group homomorphisms, quotient groups
- the Fundamental Theorem of Galois Theory,
- radical extensions
- solvability by radicals, solvable groups.

ADA Accommodation: Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from AccessTECH. No requirement exists that accommodations be made prior to completion of this approved university procedure.

Religious Holy Day Observance (OP 34.19)

1. “Religious holy day” means a holy day observed by a religion whose places of worship are exempt from property taxation under Texas Tax Code §11.20.
2. A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.
3. A student who is excused under Section 2 may not be penalized for the absence; however, the instructor may respond appropriately if the student fails to complete the assignment satisfactorily.