

MATH 3360 : Foundations of Algebra  
Section 02, T/Th 11:00AM, MA 011

**Course Information:**

Instructor: Chris Monico  
Email: c.monico@ttu.edu  
Office: MA-252  
Office Hours: M 1:00-3:00, T 2:00-3:30, W 1:00-3:00, or by appointment.  
Required Text: Durbin, *Modern Algebra: An Introduction*, Fifth Edition.

**Course outline/Important Dates:** We will cover upto and including Chapter V of the text, perhaps more if time permits.

Exam 1	Thursday, 2/12/09
Last day to drop a course	Wednesday, 3/11/09.
Exam 2	Thursday, 3/26/09
Last day of classes	Tuesday, 4/28/09.
Final Exam	Monday, 5/4/09, 1:30–4:00.

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

Homework:	25%
Exam 1:	25%
Exam 2:	25%
(Cumulative) Final Exam:	25 %

Homework will be assigned regularly and collected weekly. Homework must be **legible and stapled**. You are encouraged to work in groups on homework assignments, unless otherwise indicated; but at no time is copying of homework assignments acceptable since you will not learn anything of value that way.

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*. It is assumed that you will attend, so I will not waste your time by taking attendance. However, keep in mind that it will be decidedly difficult for you to pass this course if you do not attend. If you arrive late to class, enter quietly. If you miss a class, it is *your responsibility* to find out from a classmate what you missed (assignments, notes,...). If you are absent for an exam, you will be permitted to make it up *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 (I am not very generous with this!)

**Expected Learning Outcomes** Students learn how to think and reason abstractly in the context of group theory 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:

- Standard proof techniques: induction, contradiction, contrapositive,
- Equivalence relations, partitions, and the relation between the two,
- basic number theory results: Division Algorithm, Euclidean Algorithm, and Euler's totient ( $\phi$ ) function,
- Specific examples of finite groups including permutation groups and the integers modulo  $n$ ,
- Lagrange's Theorem, Cayley's Theorem, the First Isomorphism Theorem.

**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.