

**Math 7211**  
**Algebra II**  
**Spring 2018**  
**MWF 10:30 - 11:20 Lockett 116**

**Instructor:** William A. Adkins  
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Class Web Site: <http://www.math.lsu.edu/~adkins/m7211.html>

**Office Hours:** 9:30 - 10:30 TTh; 1:30-2:30 MW  
Other times by appointment

**Text**

Dummit and Foote, *Abstract Algebra, 3rd Edition*, Wiley, 2003. ISBN-10: 0471433349; ISBN-13: 978-0471433347.

Some supplemental topics will be taken from:

Adkins and Weintraub, *Algebra: An Approach Via Module Theory*, GTM 136, Springer, 1992.

The limited sections covered will be provided.

**Syllabus**

Following is a tentative outline for the course:

Field Theory and Galois Theory (Chapters 13-14)

Wedderburn-Artin Theory, Multilinear Algebra (Chapter 7, Adkins-Weintraub)

Group Representations (Chapters 18-19)

**Homework**

The homework assignments and any supplementary materials for the course will be posted on the class website (<http://www.math.lsu.edu/~adkins/m7211.html>). *You should check this website **regularly** for the assignments and any supplementary materials. Exercise sets will be assigned and collected regularly.* You should attempt all assigned exercises. However, I will usually choose a subset of the problems to grade from each assignment.

**Examinations**

There will be a two-hour final exam on Tuesday, May 4, from 10:00 AM – Noon.

**Grade**

See the attached sheet for information concerning the grading of homework problems. The final grade will be weighted 65% for homework and 35% for the final exam.

## Grading Homework Problems

Each homework problem will be graded on a 10 point scale. The following things are what I look for in assigning points to an individual problem:

### 10 Points

To get 10 points, the exercise must be done completely. The exercise must be written in grammatically correct sentences, which can include mathematical symbols. In fact, it is possible for entire sentences to be written in mathematical symbols. The reasoning should be correct and it should be clearly explained to the reader. Mathematical symbols should be used correctly. A common problem, which I particularly bring to your attention, is the excessive and careless use of the equal sign  $=$  and the implication symbol  $\implies$ . The paper should be neat and easy to read.

### 8 or 9 Points

A good understanding of the problem should be demonstrated although something required for 10 points will be missing. An error in an answer should not make the answer implausible. For example, an answer of  $-1$  when you are asked to produce a positive number satisfying some condition is an implausible answer. An error in an answer should not indicate a lack of understanding of the problem.

### 6 or 7 Points

Most of the exercise has been done correctly, or a good procedure was followed, but an error was made in following through the procedure which should have been caught. Some help is probably needed before another such exercise can be completed correctly.

### 4 or 5 Points

Some part of the exercise has been correctly done.