Math 645  *Abstract Algebra*

Spring Term 2018

M, W, F  2:00 – 2:50 PM

CKidder Hall 356

Instructor:  T. Schmidt  
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Off. Hours:  M, W, 12:30-13:20, F 15:00-15:50 PM; F in MSLC  
and by appointment


Grading:  Class participation and presentations (15 %),  
HW assignments (50 %),  
Mid-term (15 %), and Final [oral] (20 %).

In-class test date:  Fri. May 4  
Final oral examinations:  Mon., June 11 per schedule

Academic Honesty:  In this course, group work is permissible on homework assignments. However, all such work must be acknowledged. No group work is permissible on any examination.

Description:  We will study ring theory, field theory and in particular Galois theory. This type of mathematics can only be learned by doing many problems. There are biweekly homework assignments. There will be biweekly in-class problem sessions. Note that all students must actively participate in these sessions. The tests are comprehensive.

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**Learning Outcomes:** The successful student at the end of this course will be able to:

(1) Show improvement in the writing of clear terse proofs using words, sentences and paragraphs.

(2) State and use the definitions of the main objects of study: ring, ideal, polynomial ring, integral domain, PID, Euclidean domain, field, field extension, degree of a field extension, Galois group

(3) Discuss standard examples of rings and fields

(4) State and prove the main theorems: Chinese Remainder Theorem, Gauss’ Lemma, Fundamental Theorem of Galois Theory

**STUDENTS WITH DISABILITIES**

Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098.

**ACADEMIC HONESTY AND STUDENT CONDUCT**

Students are expected to be familiar with Oregon State University’s Statement of Expectations for Student Conduct. Please review this statement at the following web link:
http://oregonstate.edu/admin/stucon/achon.htm