

Math 442/542: *Applied and Computational Algebra*

Spring Term 2008  
M, W, F 1:00 – 1:50 PM  
Strand Agricultural Hall (Stag) 222

Instructor: T. Schmidt  
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Office Hrs: M, F Noon hour; W 3:00-3:50 PM  
F in MLC

**and by appointment**

On-line info: <http://oregonstate.edu/~schmidtt>

Text: Adams & Loustaunau, *An Introduction to Gröbner Bases*

In-class test date: Fri., April 25 (Week 4)

Take home final due: Mon., June 9 at 18:00

Grading: Class participation (5%), HW assignments (60 %),  
Mid-term (15 %), and Final (20 %).

Late work not accepted.

Description: We will follow the text quite closely. The topic is computational in nature: some homework as well as the final examination will require the use of Maple. Gröbner bases provide an explicit way to generate ideals in polynomial rings; applications abound, we will see some of these after an introduction to the basic concepts. The week 4 midterm will review the basics.

The undergraduates enrolled in mth 442 will be assigned less homework than the students in mth 542. As well, the examinations will differ appropriately.