

**COURSE SYLLABUS**  
**MATH 728**  
**FALL 2004**

Welcome to Math 728, my name is Jim Coykendall, and I will be your instructor for this course. My office is 310A Minard Hall, and my office hours this semester will be from 5:30-8:00am and from 10:00am-11:30am. Also I have hours from 1:00pm-2:30pm on Mondays and Wednesdays. If my hours are inconvenient then email me (Jim.Coykendall@ndsu.nodak.edu) or give me a call (office 231-8079, home 280-7086). Another good resource for this course is my homepage, which can be found at

<http://www.ndsu.nodak.edu/ndsu/coykenda/>

In general, you may consider my office an “open door”, and I strongly recommend that you come and see me if you are having any trouble in class (or if you find that you are not being challenged enough). Come by...I enjoy seeing my students.

**COURSE DESCRIPTION:** This is a graduate course in linear algebra. Some of the topics covered will be real and complex vector spaces and inner product spaces, module theory, projective and injective modules, universal constructions (e.g. the direct product, direct sum, tensor product, etc.), modules over a PID and the canonical forms, functors, and some elementary  $K$ -theory.

**GOALS:** To impart an appreciation of linear algebra from both an applied and pure point of view as well as to help the students gain competence with this essential tool of mathematics.

**TEXTBOOK:** There is no required text for this course. A couple of good references for this course are Hungerford’s “Algebra”, and “Basic Algebra” (Volumes I and II) by Jacobson. There are a number of other good references for some of the topics that we will cover (see me for direction here), but a primary source of information for the students will be the course notes.

**HOMEWORK:** Homework will be collected (approximately) weekly. Your homework average will be 75% of your grade.

**EXAMS:** There will be a final exam worth 25% of your grade.

**GRADES:** Here is a breakdown of the quizzes/exams/final:

Homework Average...75%

Final...25%

If you get the following scores (out of 100) you will receive:

90-100...A

80-89...B

70-79...C

60-69...D

**SPECIAL NEEDS:** Any students with disabilities or other special needs, who need special accommodations in the course, are invited to share these concerns or requests with the instructor as soon as possible.

**ACADEMIC HONESTY:** All work in this course must be completed in a manner consistent with NDSU University Senate Policy, Section 335: Code of Academic Responsibility and Conduct (<http://www.ndsu.nodak.edu/policy/335.htm>).

I wish you the best of luck in this course, please stop by and keep me posted on how you are doing.