Math 406 – Linear Algebra III  
Winter 2009  
Course Syllabus

Instructor: Anton Kaul  
Office: 25-312 (Faculty Offices East)  
Phone: 6-1678  
email: aaul@calpoly.edu  
Office Hours: Monday 2-4, Tuesday 9-10, Thursday 9-10  
Course Web Page: www.calpoly.edu/~aaul/teaching/Math406

Textbook  
The text for the course is Friedberg, Insel, and Spence, Linear Algebra, 4th ed.

Course Description  
In Math 406 we will continue our study of the fundamental concepts of Linear Algebra. Topics include eigenvalues/eigenvectors and diagonalization, polynomials associated with linear transformations and the Cayley-Hamilton Theorem, inner product spaces, and the Jordan Canonical Form. This course will focus on the theoretical aspects of the subject; proofs – and your ability to read, write and understand them – will play a dominant role.

Homework  
Homework contributes 40% to your final course grade. Homework sets will be assigned at regular intervals throughout the quarter (roughly once a week). Each assignment will be worth 20 points. The points will be allocated as follows:

- (15 points) I will choose a subset of the problems. These exercises will be graded carefully, with an emphasis on the format and logical flow of your proofs. Since I will not announce my selections until after the assignments are turned in, students should treat each problem as though it will be graded.

- (5 points) The remaining 5 points will be based on the level of completion and overall appearance of your write-ups.

I will announce the assignments (and due dates) in class. I will also post this information on the web. Once everyone has turned in their homework I will post solutions on the course web site. Late homework will be accepted but penalized at a rate of 5 points per day.

Exams  
An in-class midterm exam will be given on Friday, February 6, and contributes 25% to your course grade. The final exam, which will be comprehensive, contributes 35% to the overall course grade. We will adhere to the Cal Poly final exam schedule.

Grading  
Grades will be assigned according to the usual scale (90% ↔ A’s, 80% ↔ B’s, etc.). However, I reserve the right to lower the standard if deemed necessary (i.e., there may be a curve, but it will not hurt your grade).