

**FINISHED MATH 351 OR 511?**

**SPRING 2011**

**MATH 35300 (CLASS NUMBER 31058):**

**LINEAR ALGEBRA II WITH APPLICATIONS**

**TUTH 12:00 – 1:15**

**MACHINE COMPUTATION  
APPLICATIONS  
THEORY**

**MORE  
Linear Algebra!**

**GAMBLER'S RUIN &  
DISCRETE MARKOV CHAINS  
LEAST SQUARES ESTIMATION  
ORTHOGONALITY & PROJECTIONS  
APPLICATION TO COST ACCOUNTING  
MORE EIGENVALUES & EIGENVECTORS  
THE JORDAN CANONICAL FORM THEOREM  
SYSTEMS OF LINEAR DIFFERENTIAL EQUATIONS  
HERMITIAN MATRICES & THE SPECTRAL THEOREM**

LINEAR ALGEBRA IS ONE OF THE MOST APPLICABLE AREAS OF MATHEMATICS, BUT ONLY SINCE THE DEVELOPMENT OF DIGITAL COMPUTERS HAVE THE APPLICATIONS BLOSSOMED. LINEAR ALGEBRA ALSO HAS A RICH THEORETICAL HERITAGE AND THIS COURSE WILL INCLUDE BOTH ASPECTS. FURTHERMORE, THE COURSE WILL INCORPORATE MACHINE COMPUTATION (USING *MATLAB*®) INTO THE HOMEWORK AND SOME PARTS OF THE TESTS. FOR MORE INFORMATION, CHECK

[www.math.iupui.edu/~ccowen/Math353.html](http://www.math.iupui.edu/~ccowen/Math353.html)

**Math 351 & 353 are a  
'two course sequence' for the Pure Math option!**