

SM 311p Syllabus  
Spring 2004

This course will start with complex arithmetic. The topics covered will include complex Taylor series and uses of exponentials of complex numbers.

The next large topic area will be linear algebra and matrices. Covered items include: vector spaces, bases, linear transformations, solving systems of linear equations, matrices, kernel and range, inner products, rotation matrices, hermitian matrices, and lorentz transformations.

The third main topic is vector calculus through Green's identities.

Time permitting we will then cover curvilinear coordinates, Jacobians, and tensors. Or we will cover boundary value problems for various partial differential equations.