This course introduces the student to some basic problems in scientific computing such as solving nonlinear equations, numerical integration, interpolation, and numerical solution of ordinary differential equations. Typically, these problems are too complex to solve analytically, i.e., with pencil and paper, so we use computers to approximate the solution. In this course the student is introduced to the scientific programming language C++ which is probably the easiest object-oriented programming language to learn.

The class will be taught in a computer laboratory setting and is a very “hands-on” class. In addition to learning C++, students will learn a graphics program to visualize their results. The skills learned in this course can be used in most of the student’s other scientific courses.


**Instructor:** John Burkardt

**TR 11:00-12:15  152 DSL**

**Prerequisite:** Calculus I