Objective: To provide the necessary tools and experiences for independently and confidently navigating the ever-changing world of information technology.

The course is divided into three major sections:

1. IT Concepts – the foundations underpinning IT
   What is information, and how is it represented in computers? What does it mean to be “digital”? What is computation? Modeling and abstraction; the limits of computation; universality; computer technology and computer organization; fundamentals of networks; object-oriented design

2. IT Skills – developing application proficiency
   Basic operating system facilities; WIMP interfaces and concepts; using a text-editor; programming concepts; manipulating graphics and sound; computer networking; spreadsheets and plotting graphs; using the internet to find information; navigating, dissecting and developing Web pages; using databases to access information; generalizing and becoming operationally attuned; information security; and debugging

3. IT Capabilities – problem solving, managing complexity, and supporting high-level thought
   Thinking algorithmically; sorting and searching; using a computer to model and test a hypothesis; how to automate tedious tasks; communicating and collaborating with IT; dealing with and planning for the unexpected; maintaining savvy in the face of rapidly changing technology

Grading: Best 4 of 5 project-problem sets: 40%
2 Quizzes: 30%
Final Exam: 30%

Project/Problem sets will be due at the specified class meeting (before lecture). You will have at least two weeks to complete each set. Late problem sets will be penalized as follows: