

## **Some Spring 2006 CS Course Offerings**

### CS 139 - Theory of Computation

Focuses on mathematical models of computation, and using these to determine the types of problems that can and cannot be computed. Practical applications of some models are also examined, and relevant programming projects (regular expressions and XML) are assigned. Issues of algorithmic complexity are also discussed, resulting in a discussion of the famous, and still unresolved, “P = NP” question.

### CS 146 - Object-Oriented Software Development

Careful planning of object-oriented software systems, and teamwork, are the principal concerns of this course. The very popular “Unified Modeling Language” is used throughout, as a basis for diagramming various aspects of software requirements, design and implementation. Several “Design Patterns” are studied as potential bases for software systems. The “Object Constraint Language” is studied as a technique for realizing and enforcing requirements. A completed working software system will be presented by each team at the end of the course.

### CS 160 - Operating Systems

Many O. S. design issues are studied in detail at a conceptual level. However, many of these are more fully dealt with in team programming projects that involve manipulating the code (written in C) for a particular operating system called “Minix.” While this is a relatively small operating system, it does include many features that are familiar in Unix and Linux. The hands-on “low-level” C programming experience obtained in this course is of far wider value in industry.