# **CMPSCI 190IN: Introduction to Informatics**

## WHAT ARE THE BIG IDEAS IN COMPUTER SCIENCE?

CMPSCI 19DIN is an introduction to the main concepts of Informatics. There are several "Big Ideas" in computing, including but not limited to abstraction, data and information, algorithms, programming, and analysis of both computational problems and computational artifacts. This class provides an introduction to those ideas and considers some of the ways that those computing principles might be used to solve real world problems. Computer-based assignments are an integral part of this course but no programming knowledge or prior programming experience is expected or required.

Course goals include developing an understanding of computational thinking, methods, and/or artifacts, as well as how to create, test, evaluate, and debug those artifacts. Specific examples include exploring hierarchies of abstraction, searching and sorting strategies, analysis of errors in numerical programs, modeling of color, etc.

## FALL 2014 TTH 4:00PM

## PROF. WILLIAM T. VERTS PROF. MICHELLE TRIM

#### NO PREVIOUS PROGRAMMING EXPERIENCE REQUIRED OR EXPECTED.

### SEVEN BIG IDEAS:

- . CREATIVITY
- 2. ABSTRACTION
- 3. DATA AND INFORMATION
- 4. ALGORITHMS
- 5. PROGRAMMING
- 6. NETWORKS
- 7. INNOVATION



http://people.cs.umass.edu/~verts/cmpscil90IN/cmpscil90IN.html