CS105 Introduction to Computer Concepts

Section 2 - Spring 2014

Instructor:	Yang Mu, (617) 287-6438, yangmu@cs.umb.edu
Class room & time:	W01-0029, TuTh 4:00PM-5:15PM
Office hours:	S-3-158A, TuTh 7:00PM-9:00PM, or by appointment
Class website:	http://www.cs.umb.edu/~yangmu/cs105/

Course Description

This course presents an overview of the role of computers in society: their application and misapplication, their capabilities and limitations. Applications may include artificial intelligence, medical, aerospace and business use of computers. Computer hardware and associated technologies are discussed. Computer programming is taught from a non-mathematical, problem-solving point of view; the course objective is to help students acquire an understanding of the programming process, rather than to develop complex or extended computer programs. This survey course is not part of the computer science major sequence. Students planning to major in computer science should start with CS 110.

Textbook (good to have but not required):

Name: Computer Science Illuminated (Fourth Edition)
Authors: Nell Dale & John Lewis
Publisher/Edition: Jones and Barlett
ISBN: 978-0-7637-7646-6

Objectives

•Understand the history, evolution, applications, and trends of today's computer technologies
•Understand how different components of a computer work
•Understand programming from a non-mathematical point of view
•Improve communication skills (technical writing, teamwork, and presentation)

Topics

Applications
information retrieval (Google, Microsoft), multimedia (Flickr, YouTube), social network (Facebook, LinkedIn, Twitter), cloud service (Amazon, Google), database (Microsoft, Oracle), hardware (Apple).
Programming:
algorithms and problems, Languages, data types and object oriented concept, IDE, compiler, internet and HTML.
Computer foundation:
data representation, hardware, operating system, networking, logic gates, turing machine and binary.

Evaluation

• Homework (20% of final grade): There will be totally 3-6 homework assignments.
• Two midterm exams and one optional final (50% of final grade): Two best grades counts.
• Course project and Presentation (20%): Each group (maximum 3 students) is required to give an oral presentations about an assigned topic.
• Class attendance (10%): there will be random quizzes in class. Note: No laptop or cell phone devices are allowed to be used during class section.
• Grading:
91+ = A, 89+ = A-,87+ = B+, 83+ = B,
80+ = B-,77+ = C+, 73+ = C, 70+ = C-,
67+ = D+, 63+ = D, 60+ = D-, 0+ = F