

UIUC Upward Bound Summer Residential Component 2008 Computer Science

Course Information

Instructor: Dr. Prince
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Time & Place: 3-3:50 Undergraduate Library 289
Webpage:

Introduction

Welcome to Introduction to Computer Science! This course aims to show you new ways to use computing technology for school, careers, and personal enjoyment.

This course will be very hands-on. We will spend most of our time exploring new concepts through experimentation and creating documents (slideshows and webpages) and programs.

Course Overview

This course is divided into three units, each running approximately two weeks.

The first unit is a quick exploration of Microsoft Office. We will start with a brief glimpse at some Microsoft Word features. From there we will learn how to use Excel to create and manipulate spreadsheets. Finally, we will develop slideshow presentations using Powerpoint.

The second unit is webpage design. We will learn some basic HTML and learn how to use it to create a personal webpage.

The final unit is computer programming. We will be introduced to the computer language Java and write some Java programs. Along the way, we will learn functional programming tools and techniques.

Key Concepts

Several concepts will play a key role in our study of computer science this semester:

(1) *Precision* - Computers are very particular about how input is presented. We must be careful to understand and obey proper syntax.

(2) *Composition and Decomposition* - All processes are composed of simple parts, and computer processes are no different. We will learn to take a seemingly complex problem statement, break it into manageable parts, and put those parts together to accomplish our goal.

(3) *Presentation* - The way information is presented greatly influences its transmission. We will study effective communication as it relates to computer documents.

Grading Policy

There will be daily homework for this course. In addition, there will be a quiz or exam at the end of each week. Almost half the grade (45%), though, is based on the projects from each unit, namely, a Powerpoint presentation, a webpage, and a Java program.

The grade will be computed as follows:

Quizzes	13%
Midterm	7%
Final Exam	15%
Homework	20%
Powerpoint Project	15%
Webpage	15%
Java Program	15%

The scale for grading will be:

A	85-100%
B	70-85%
C	55-70%
D	40-55%
F	under 40%

Course Schedule

Mon	June 23	<i>Introduction and Pretest</i>
Tues	June 24	<i>Practice with Microsoft Word</i>
Wed	June 25	<i>Introduction to Microsoft Excel</i>
Thur	June 26	<i>Practice with Microsoft Excel</i>
Mon	June 30	<i>Introduction to Microsoft Powerpoint</i>
Tues	July 1	<i>Practice with Powerpoint</i>
Wed	July 2	<i>Conclusion of Powerpoint</i>
Mon	July 7	<i>Introduction to HTML</i>
Tues	July 8	<i>HTML Images and Links</i>
Wed	July 9	<i>HTML Questions and MIDTERM</i>
Thur	July 10	<i>HTML Tables and Lists</i>
Mon	July 14	<i>HTML Colors</i>
Tues	July 15	<i>HTML Practice 1</i>
Wed	July 16	<i>HTML Practice 2</i>
Mon	July 21	<i>Introduction to Java and OOP</i>
Tues	July 22	<i>Java Datatypes</i>
Wed	July 23	<i>Booleans and Loops</i>
Thur	July 24	<i>Arrays</i>
Mon	July 28	<i>FINAL EXAM</i>
Tues	July 29	<i>Java Practice 1</i>
Wed	July 30	<i>Java Practice 2 and Posttest</i>

Important Dates

Mon	June 23	<i>Pretest</i>
Thur	June 26	<i>Quiz</i>
Wed	July 2	<i>Powerpoint presentation, Quiz</i>
Thur	July 9	<i>Midterm</i>
Wed	July 16	<i>Webpage, Quiz</i>
Thur	July 24	<i>Quiz</i>
Mon	July 28	<i>Final Exam</i>
Wed	July 30	<i>Java Program, Posttest</i>