Introduction

Instructor

Teaching philosophy

Course topics

Syllabus Highlights
Instructor

- William Mitchell

- Research programmer here in Computer Science since July 2009, working on the AnimalWatch project. Mostly work with Adobe Flex and ActionScript, and a little Groovy.


- Occasionally teach courses in programming languages at The University of Arizona (C SC 352, 372, and others).


- Lecturer, not a professor.
Teaching Philosophy

• I work for you!

• My goal: counting lecture time you'll need to average no more than four hours per week to maintain an average over 90%.

• Effective use of office hours, e-mail, IM, and the telephone can equalize differences in learning speed.

• I should be able to answer every pertinent question about course material.

• My goal is zero defects in slides, assignments, etc.
About the course title...

UA Catalog:
  “Advanced C++”

More accurate:
  “Fundamentals of C++”

Course description

This course covers the fundamentals of the C++ programming language, building on prerequisite knowledge of C and Java. Major topics include class definition, object creation and interaction, aggregation of objects, single and multiple inheritance, operator overloading, I/O streams, exception handling, and templates. The Standard Template Library is introduced with coverage of the principles of containers, iterators, algorithms, and function objects.

An underlying theme of the course will be the tensions that arise from C++ simultaneously providing support for object-oriented programming, type extensibility, high-level language facilities, very strong compile-time type-checking, and efficient execution.
Topic Sequence

This is the anticipated set and sequence of topics:

- Introduction and Overview
- Class and Object Basics in C++
- Fine Points on Classes and Objects
- Miscellany—References, `const`, Friends, and more
- Aggregations of Objects
- Operator Overloading
- IO Streams
- Inheritance
- Multiple Inheritance
- Templates
- Exceptions
- Run-Time Type Information
- Introduction to the C++ Standard Library
Syllabus Highlights

- Prerequisites
- (No) Textbook
- Grading Structure
- Assignments
- Bug Bounties
- Quizzes
- Office Hours
- E-mail
- IM
- Telephone
- Mailing List
- Original Thoughts
- (NO!) Cheating

Read the syllabus!
Class Picture!