

CS 150  
Introduction to Computer  
Science 1

**Professor: Shereen Khoja**

**August 30, 2010**

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**Shereen Khoja**

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- Office 203C Strain
- Office hours:
  - MWF 2-3pm
  - or by appointment

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**Chadd Williams**

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## What is CS150?

- CS150 is a programming course
- You will learn
  - Syntax (Grammar)
    - The mechanics of writing programs in C++
  - Design
    - Logical reasoning
    - How do I solve this problem with a program?
    - How do I break this into smaller, solvable problems?
- No previous programming skills needed!

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<http://zeus.cs.pacificu.edu/shereen>

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Fall 2010 Classes  
CS 150  
CS 493

Quick Links  
Schedule  
Research Interests

Office Hours  
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Map It

# CS150

Introduction to Computer Science I

### Course Description

CS150 is a first course in computing and programming fundamentals. The goal of this course is to introduce you to problem solving through programming a computer. No previous computer experience of any type is required, but a deep interest in using one is. In this course, you will learn to program in C++. By the end of this course you should be able to write a program to do anything you want, given enough time and patience.

### Course Materials

- Syllabus
- Tentative Schedule
- Coding Standards
- Official clock

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## Course Schedule

- The course schedule I have posted is tentative.
- The online schedule will be accurate and up to date.
- Contains:
  - handouts
  - assignments
  - labs

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## Schedule

	Date	Topics	Homework & Assignments	Notes
Week 1	August 30	Basics of a C++ program		Chapters 1 & 2
	August 31	Lab		
	September 1	Variables and primitive data types		
	September 3	Input/output statements		
	September 6	Labor Day - NO CLASS		
Week 2	September 7	Lab		
	September 8	Arithmetic statements		Chapter 3
	September 10	Operator associativity and precedence	Fraction calculator is due	
	September 13	Equality & relational operators		
Week 3	September 14	Lab		
	September 15	Logical operators		Chapter 4
	September 17	If selection structure		

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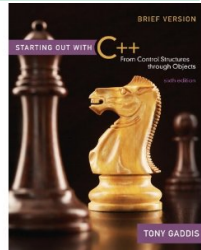
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## Syllabus

- Book/Handouts
- Software
  - Visual Studio 2010
- Grades
- Assignments
  - GIFT
- Lab



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## Syllabus

- Working outside of class
  - 8 hours per week
  - 1 hour studying (not working on an assignment)
- Academic Dishonesty
  - cheating
  - penalties
- Grade Complaints
- Learning Support Services

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## Respect!

- Class starts promptly at 1 pm!
- You: Arrive on time!
- Me: End class on time!
  
- Turn off your electronic devices!
  
- Don't log on to the computers during lecture.
  
- Participate! Ask questions!

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## Online Calendar

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## How to Succeed in CS150

- Don't miss class.
  - Take notes
  - Bring book and notes to lab and lecture
- Try and read ahead
  - bring questions to class!
- Start programming assignments early
  - they take **much longer** than you think
- Do as much on your own as possible.



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## How to Succeed in CS150

- Read the assignments carefully and follow all directions
- See me **as soon as possible** about any questions!
- Don't forget that you are at a small school!
  - and you are paying for it!

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## How to send an effective email

To: shereen@pacificu.edu  
From: hall4242@pacificu.edu  
Subject: CS150: quadratic formula

Hi Shereen,  
I'm working on the programming assignment and I'm not sure how to calculate a square root in C++. Any hints?

Thanks,  
Lesley

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## Homework!

- Homework assignment #1
- Fill out the survey on the class web page
- Bring a printed copy **to my office**
- DUE: By Friday 5pm
- Be prepared to discuss your answers!

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# Introduction to Computers and Programming

## Chapter 1

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## What is a Computer?

- What is your definition?
  
- What is Computer Science?

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## Question

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- Can computers think?

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## Program

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- Program
  - ??
- Programming language
  - A language used to write programs
  - Examples?

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## Programming

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- Be very specific about what you want the computer to do
- It follows directions precisely

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## Programming Language

- Machine language
  - Zeroes and ones
  - CPU dependent
- High level language
  - Instructions look like everyday English
    - sort of
  - Each instruction can perform many machine language instructions

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## C++

- Based on the C programming language
- C++ is a high level programming language
- One of today's most popular programming languages
- Used extensively in industry

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## Your First C++ Program

```
*****  
// File name: hello.cpp  
// Author:   Bob Smith  
// Date:    08/30/2009  
// Purpose: This program displays a welcome message to  
//           the user  
//*****  
#include <iostream>  
#include <string>  
  
using namespace std;  
  
int main()  
{  
    string name;  
  
    cout << "Type your name, then press enter" << endl;  
    cin >> name;  
    cout << "Hello " << name << "!" << endl;  
  
    return 0;  
}
```

Program Output:

```
Type your name, then press enter  
Doug  
Hello Doug!
```

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## Summary

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- Today we have looked at:
  - The syllabus
  - Concept of programming
- Next time we will:
  - Learn how to write our first C++ program
  - Output data to the screen
- Completed sections 1.1 - 1.3 from the book
  - Pages 1-12

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