

# CSC 200 Syllabus

## Computer Problem Solving for Science and Engineering

Fall 2009

### Time and Location

**Lecture:**

Monday, Wednesday                      3:00-4:15                      Tyler Hall 106

**Lab:**

Tuesday                                      11:00-12:45                      Tyler Hall – Envision Lab

### Instructor Information

**Name:** Daniel Ducharme  
**Email:** [dducharme@cs.uri.edu](mailto:dducharme@cs.uri.edu)  
**Office:** Tyler 136  
**Office Hours:** Wednesday 12-2 in the Lab

### Lab Assistant

**Name:** Pankaj Ahire  
**Email:** [pankajahire@gmail.com](mailto:pankajahire@gmail.com)  
**Office:** Tyler 136

### Teaching Assistant

**Name:** Ben Roberts  
**Email:** [ben@cs.uri.edu](mailto:ben@cs.uri.edu)  
**Office:** Tyler 133

### Textbook

Big C++, Second Edition  
Cay Horstman, John Wiley & Sons, Inc., 2005  
ISBN: #978-0-470-38328-5

## Website

**Main:** TBA

**Backup:** [www.QuantumComputerService.com/csc200.html](http://www.QuantumComputerService.com/csc200.html)

## Prerequisites

Credit or concurrent enrollment in MTH 131 or MTH 141

## Course Goals and Overview

In today's environment computers form a key component in almost every aspect of our lives. Computers are everywhere, from your car to your cell phone, and they are increasing every day. There are few tasks in today's economy that do not require any computer interaction and many businesses even rely on computers to do what would have been done by hand years ago.

Computers now allow people to access the internet, to play games, or to communicate with friends and family around the world. They increase productivity by storing, manipulating and displaying data in a meaningful fashion that cuts out on much of the manual work of the past. Mainframes keep track of your bank accounts and your e-mail, while supercomputers track the space shuttle, and the normal everyday PC calculates your house value and amount of taxes you owe.

As computers shrink and become more powerful following Moore's Law, applications that could only be performed on powerful computers of years past, now are available for your iPod. With this increasing power it pays to understand not only how computers work with applications, but also how those applications are designed and created.

After taking this class you will understand the basics of how an idea is first transformed into an algorithm that can be executed on a computer. Then you will learn how to use programming as a tool that will allow you to solve problems that may occur in your field. In this course the tools will be C++ and object-oriented programming techniques. This course is meant to serve, not as a programming course, but as a computer problem solving course that uses C++. While CSC 200 uses C++ as its programming language, the techniques we learn here can be easily applied to any language.

## **Grading**

<b>Homework</b>	<b>30%</b>
<b>Programs</b>	<b>20%</b>
<b>Labs</b>	<b>15%</b>
<b>Class Participation</b>	<b>5%</b>
<b>Midterm Exam</b>	<b>15%</b>
<b>Final Exam</b>	<b>15%</b>

**Homework:** Homework assignments will be assigned every Wednesday and will be due on the following Monday at 3:00 PM. They will be posted on the course website and students will be responsible to remember to get the homework assignment. Because of the nature of the course, the only way you can truly learn the material is to do the homework which will be a mixture of questions, programming questions, and independent research.

**Programs:** There will be two programming assignments during the course of the semester, each of which will be worth 10% of the final grade. The purpose of the programs will be for the student to demonstrate their ability to solve a complex problem with the lessons learned and knowledge gained up to that point.

**Labs:** Lab assignments will be posted on Monday and are due on that Friday. All students **MUST** attend the lab period unless you are sick (See Illness Due to Flu below), but can leave as soon as the assignment is finished or time is up. If you do not have enough time to finish the assignment in lab then you must complete the assignment on your time and get it in by Friday.

**Class Participation:** This section is determined by the student's effort level regardless of ability. Showing up on a regular basis, doing all of the assignments on time, and attempting to answer questions in class will increase the points that are awarded.

**Midterm Exam:** This will be a closed book, closed notes, in-class exam that will be on Wednesday, October 21 at 3:00 PM. The exam should be done in pencil to allow you to change your answers as needed and several should be brought to ensure that you have enough to complete the exam.

**Final Exam:** The final exam will be on Friday, December 18 from 3:00 to 6:00 PM in room 106. Again bring several pencils to allow you to change answers.

## **Illness Due to Flu**

The H1N1 Flu Pandemic may impact classes this semester. If any of us develop flu-like symptoms, we are being advised to stay home until the fever has subsided for 24 hours. So, if you exhibit such symptoms, please do not come to class. Notify me at [dducharme@cs.uri.edu](mailto:dducharme@cs.uri.edu) of your status, and we will communicate through e-mail for the class. We will work together to ensure that course instruction and work is completed for the semester.

The Centers for Disease Control and Prevention have posted simple methods to avoid transmission of illness. These include: covering your mouth and nose with a tissue when coughing or sneezing; frequently washing your hands to protect from germs; avoiding touching your eyes, nose and mouth; and staying home when you are sick. For more information, please view [www.cdc.gov/flu/protect/habits.htm](http://www.cdc.gov/flu/protect/habits.htm). URI information on the H1N1 will be posted on the URI website at [www.uri.edu/news/H1N1](http://www.uri.edu/news/H1N1), with links to the [www.cdc.gov](http://www.cdc.gov) site.

## **Late Assignments**

Assignments are due by the beginning of class every Monday when they will be collected. If you cannot make it into class because of illness or any other reason than the assignment must be e-mailed to both me and Ben before 3:00 PM. All assignments handed in late will lose half credit. All assignments can be handed in at any time after the due date for half credit, so there is no reason to ever not turn an assignment in.

Exams are to be taken on the days specified unless extraordinary circumstances such as a medical emergency prevent you from attending. In the event that you are unable to attend an exam for valid reasons it is your responsibility to inform me as soon as possible so that a makeup can be set.

## **Getting Help**

This course is designed to be challenging while also being fun. That being said it is easy to fall behind in this class and can be difficult to catch back up. If you find yourself having trouble please come by my office hours or schedule an appointment to get help.

## **Disabilities**

Any student with a documented disability is welcome to contact me as early in the semester as possible so that we may arrange reasonable accommodations. As part of this process, please be in touch with Disability Services for Students Office at 330 Memorial Union, 401-874-2098.

## **Important Semester Dates**

<b>Advising Day</b>	<b>September 8</b>
<b>Classes Begin</b>	<b>September 9</b>
<b>Open Add Period</b>	<b>September 9-15</b>
<b>Late Add Period</b>	<b>September 16-22</b>
<b>Last Day to Add and to Add Pass/Fail Option (Last day to drop with prorated billing adjustment)</b>	<b>September 22</b>
<b>Columbus Day Classes do not meet</b>	<b>October 12</b>
<b>Midterm</b>	<b>October 21</b>
<b>Mid-Semester and Last day to Change from Pass/Fail Option</b>	<b>October 26</b>
<b>Midterm Grades for Freshmen due in e-campus by 12:00 PM</b>	<b>October 27</b>
<b>Last Day for students to Drop Courses</b>	<b>November 2</b>
<b>Election Day (Classes Meet)</b>	<b>November 3</b>
<b>Veterans Day Classes do not meet</b>	<b>November 11</b>
<b>Thanksgiving Recess Classes do not meet</b>	<b>November 26-29</b>
<b>Classes End</b>	<b>December 11</b>
<b>Reading Day</b>	<b>December 14</b>
<b>Final Exams</b>	<b>December 15-19, 21-22</b>
<b>CSC 200 Final Exam</b>	<b>December 18, 3:00-6:00</b>
<b>Final grades due in e-campus by 12:00 PM</b>	<b>December 28</b>
<b>Official Date for December Graduation</b>	<b>December 31</b>

## **Academic Honesty**

All work in this course must be the students own work. Any sources that are used **MUST** be properly documented using MLA format which can be found at <http://owl.english.purdue.edu/owl/resource/557/01/>. Any instance of academic dishonesty will immediately be reported to the Dean of the student's college.

Remember any work that is not your own design and creation needs to be documented, whether it comes from the internet, another student, or a friend who knows programming. If you hand in an assignment that I believe exceeds your ability to program, and does not have a citation, be ready to answer questions as to several specifics and why certain things were done the way they were.

Remember also that the purpose of the course is to teach you how to solve problems using C++ and object oriented programming, not to teach you how to find solutions to your problems online. For that reason even if you have fully cited your sources you may not receive full credit on an assignment if your effort of work is not satisfactory.

Here is an excerpt from the University Manual

**8.27.10 Cheating and Plagiarism.** Students are expected to be honest in all academic work. Cheating is the claiming of credit for work not done independently without giving credit for aid received, or any unauthorized communication during examinations.

**8.27.11** A student's name on any written exercise (theme, report, notebook, paper, examination) shall be regarded as assurance that the work is the result of the student's own thought and study, stated in the student's own words and produced without assistance, except as quotation marks, references and footnotes acknowledge the use of other sources of assistance. Occasionally, students may be authorized to work jointly, but such effort must be indicated as joint on the work submitted. Submitting the same paper for more than one course is considered a breach of academic integrity unless prior approval is given by the instructors.

**8.27.12** In preparing papers or themes, a student often needs or is required to employ sources of information or opinion. All such sources used in preparing to write or in writing a paper shall be listed in the bibliography. It is not necessary to give footnote reference for specific facts which are common knowledge and have obtained general agreement. However, facts, observations and opinions which are new discoveries or are debatable shall be identified with correct footnote references even when restated in the student's own words. Material taken word for word from the written or oral statement of another person must be enclosed in quotation marks or otherwise clearly distinguished from the body of the text and the source cited. Paraphrasing or summarizing the contents of another's work usually is acceptable if the source is clearly identified but does not constitute independent work and may be rejected by the instructor.

**8.27.13** Notebooks, homework and reports of investigations or experiments shall meet the same standards as all other written work. If any work is done jointly or if any part of an experiment or

analysis is made by someone other than the writer, acknowledgment of this fact shall be made in the report submitted. Obviously, it is dishonest to falsify or invent data.

8.27.14 Written work presented as personal creation is assumed to involve no assistance other than incidental criticism from others. A student shall not knowingly employ story material, wording or dialogue taken from published work, motion pictures, radio, television, lectures or similar sources.

8.27.15 In writing examinations, the student shall respond entirely on the basis of the student's own capacity without any assistance except that authorized by the instructor.

## **Final Notes**

**C++ is a useful tool that is highly applicable in the real world. With nothing other than the tools used and learned in this course you will be able to fix real world problems. The biggest thing to remember is to try hard, do the work assigned, and most importantly to have fun!**