

## CSC110: Introduction to Problem Solving with Computers

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**Class 9:30 am - 10:45 am TR Webb Hall 307 Sep 06, 2006 - Dec 23, 2006**

### **Goal:**

The goal of this course is to give students to appreciation and knowledge of designing, implementing and testing applications. This course explores topics of computer science within a framework of a four-layer hierarchy of abstractions: algorithms, hardware, virtual machines, and software.

### **Readings:**

All readings for CSC 110 are online at WebCT. These include the items listed in Table 1.

Table 1: Readings

Learning Topic	Sub-reading
Web	W3 HTML Guide W3: Advanced HTML Guide HTML Tutorial XHTML Tutorial CSS Tutorial XML Tutorial CERN XML/XSL Tutorial
Raptor	Introduction to RAPTOR programming Graphics programming with RAPTOR Programming loops and selections Arrays
Alice	Handout 1 Handout 2 Handout 3 Handout 4 Handout 5
C++	Week 1 Week 2 Week 3

### **Grading:**

- 30% - Attendance, Participation, Quizzes and Homework: given as necessary (more or less daily) to promote and insure a high level of quality participation.

- 30% - 14 programming assignments addressing very specific topics identified in class. These programs may be rewritten *once* to improve your grade. We expect solid, dense, error-free program that draws on class discussions and readings.
- 40% - Group Presentations: A summary of this course, what you learned. Creative and innovative review of the whole cluster.

Table 2: Deliverables

	Unit	Topic	Assignment Name 	Points	Due Date
Lecture 01	Web	Introduction to HTML	<a href="#">Assignment 01- Web 01</a>	40	September 12, 2006 11:59 PM
Lecture 02	Web	Intermediate Web Development	<a href="#">Assignment 02- Web 02</a>	40	September 19, 2006 11:59 PM
Lecture 03	Web	Applying CSS to Your Pages	<a href="#">Assignment 03- Web 03</a>	40	September 26, 2006 11:59 PM
Lecture 04	Raptor	Introduction to Programming Using Flowcharts	<a href="#">Assignment 04- Raptor 01</a>	40	October 3, 2006 11:59 PM
Lecture 05	Raptor	Introduction to Programming Using Flowcharts	<a href="#">Assignment 05- Raptor 02</a>	40	October 10, 2006 11:59 PM
Lecture 06	Raptor	Introduction to Programming Using Flowcharts	<a href="#">Assignment 06- Raptor 03</a>	50	October 17, 2006 11:59 PM
Lecture 07	C++	Getting Started on Procedural Programming	<a href="#">Assignment 07- C++ 01 Imperative</a>	40	October 24, 2006 11:59 PM
Lecture 08	C++	Intermediate Procedural Programming	<a href="#">Assignment 08- C++ 02 Imperative</a>	40	October 31, 2006 11:59 PM
Lecture 09	C++	Functions and Arrays	<a href="#">Assignment 09- C++ 03 Imperative</a>	50	November 7, 2006 11:59 PM
Lecture 10	Alice	Introduction to the Object-Oriented Concept Using Alice	<a href="#">Assignment 10- Alice 01</a>	40	November 14, 2006 11:59 PM
Lecture 11	Alice	Introduction to the Object-Oriented Concept Using Alice	<a href="#">Assignment 11- Alice 02</a>	50	November 21, 2006 11:59 PM
Lecture 12	C++	Basic Object-Oriented Programming	<a href="#">Assignment 12- C++ 04 OOP</a>	40	December 5, 2006 11:59 PM
Lecture 13	C++	Intermediate Object-Oriented Programming	<a href="#">Assignment 13- C++ 05 OOP</a>	40	December 12, 2006 11:59 PM

Lecture 14	Review	Review	<a href="#">Assignment 14- C++ 06 OOP</a>	50	December 15, 2006 11:59 PM
Lecture 15	Presentation	Presentation	<a href="#">Thesis Project</a>	400	December 17, 2006 11:59 PM

**Note**

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact the Office of Accessibility Services at 465-5573. To avoid any delay in the receipt of accommodations, you should contact the Office of Accessibility as soon as possible. Please note that we cannot provide accommodations based upon disability until we have received an accommodation letter from the Office of Accessibility Services. Your cooperation is appreciated.

**Relationship to Other Classes:**

This course is a foundation course in the R Cluster for fall 2006, <http://www.easternct.edu/depts/cee/fyp.htm> . The cluster is composed of three classes as given in Table 3.

Table 3: Cluster

Cluster R		
CSC 110- 15R Introduction to Computing and Problem Solving	BUS 230-15R Business & Society, GER IV.B.	FYR 174- 18R Resources, Research, and Responsibilities
T/R 9:30- 10:45 Solving GER V.C (G. Rommel)	TR 12:30-1:45 (E. Martin)	3-3:50 (G. Rommel )
	M 2 – 4:45 PM Field Experience	

**Deliverables:**

All deliverables, gradable items, must be entered in WebCT. Details of each deliverable may be found at WebCT within the assignment module. All deliverables should fit together as a student portal or class portal. The assignment assumes an oral presentation on the next class after the due date. Dates, times and instructions on the deliverables are maintained at WebCT, WebCT instructions supersede those of the syllabus.

Based on the instruction in CSC 110, all students are expected to maintain a web site within their web folder in a folder labeled CSC110. Within that folder each student must maintain one web page labeled index.htm or whatever default web page is currently supported by ECSU’s IT Department. In each student folder a page must be accessible from the default page to all assignments and other student pages. The technical details are given in CSC 110.

Each group and student is expected to maintain a web site label CSC 110. This site will have the following block-sites

- Web
- C Programming
- Visual Object Oriented Programming

- C Plus Plus Object Oriented Programming
- Thesis

**Changes:**

We may change the schedule of activities to better fit with Chase Institute, UPE, ACM, University Hours, and other lectures on campus. This will most likely only alter timing and order, not content. We do occasionally change assignments and group activities based on the dynamics of the course. Everyone experiences the change at the same time. Sometimes, we see things aren't going well, we realize changes need to be made. We see needs, gaps, snow happens, etc. Please be flexible. We will be flexible too.

**Grades:**

No matter what anyone tells you, grading is VERY subjective even though we try to make it as objective as possible. If you have a problem with grading, feel it was unfairly harsh (We have yet to have a student complain that we gave too good a grade) – please ask to meet with one of us. Be ready to explain your case – what you meant, why you feel you do deserve the credit, etc.

**Very poor grades:**

We are willing to work with students to improve very poor grades – but that means you will need to do a lot of work. This is a huge break for you – rewriting an exam, or redoing an assignment after the due date has passed. Again, we are flexible and generous, but need to see you do the work. If you are serious, we will be too. If you are not, don't expect too much to change.

**Trends:**

Improvements over the semester are noted – We have a different style that some find hard to get used to. We are famous for vague assignments – We want you to think about how best to address the topic. We almost always allow rewrites – engage with me and we can always work something out.

**Late papers, programs and/or Web pages:**

Late papers and programs will be accepted. You will lose 10 points (1/10 of the overall grade or equivalent to 10% per 100% point scale) per day. We often assign rewrites you can not engage in a rewrite if your paper is late for the original due date!

**Groups:**

It is normal to experience scheduling difficulties, personality differences, leadership battles, and the proverbial 'slackers.' Bring problems to our attention immediately. Perhaps we can help. However, on occasion when the majority of the group has a serious complaint about a member, we cannot risk the entire group doing poorly. In such a case, the group, with one of us in attendance, can schedule an 'intervention' where we discuss the need to change and improve, identify clear expectations, etc. If this fails, students can be removed from a group, at our discretion, and assigned a term paper on related topic (10 pages, single spaced).

**Group Meetings:**

We expect you to identify early in the semester a time that all members can attend a meeting outside of class. This should be a standing meeting time, worked into your schedule so you don't have to go through the process each time you need to meet. Pick one time, 1-2 hours and stick with it for the semester.

**Participation:**

We should know you by the middle of the class. You need to make an effort to let us know you. Participate, stop by and see us. Introduce yourself outside the classroom; remind us of your name. You need to remember only 4 or 5 names for your professors. We need to learn the names of about 100 students per semester... help us in that process! It will work to your advantage.

**In the Classroom:**

Let us see you struggle with difficult concepts – ask questions, there are times that you just don't get it – ask for clarification, tell us what you think you know and lets work it out. We expect to address these issues in class. And we expect you to be comfortable in asking such questions.

**Group Presentations:**

These take many forms, and we are always clear regarding our expectations beforehand. Regardless, all participants must participate in each presentation, though you may assign specific roles within your group. PowerPoint slides should be used sparingly (one per minute as a general rule). Dress should be professional, business attire. Time limits are strictly enforced. Presentations should be prepared and rehearsed. Police, guide, and help your own group members! Notes are fine. However, you should NEVER read a speech.

Table 4: Optional Assignments

<a href="#">Assignment 06a- Raptor 04 (Optional)</a>	Points	December 15, 2006 11:59 PM
<a href="#">Assignment 01- Costs 01 TCO (Optional)</a>	TBD	September 12, 2006 11:59 PM
<a href="#">Assignment 02- Raster Graphics (Optional)</a>	TBD	September 14, 2006 11:59 PM
<a href="#">Assignment 03- Early Bird Bonus (Optional)</a>	TBD	December 12, 2006 11:59 PM

Faculty Homepages

<http://www.easternct.edu/depts/bus/MARTIN.htm>

<http://www.easternct.edu/personal/faculty/grommel/CGRommel.html>