Computer Science & Engineering Syllabi   College of Engineering & Computer Science

Winter 2006

CS 241-01: Introduction to Computer Science II

Praveen Kakumanu
Wright State University - Main Campus

CS 241: Introduction to Computer Science II
Winter 2006

Instructor: Praveen Kakumanu

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Course Description

This course is the second in the three course sequence "Introduction to Computer Science" offered by the Computer Science department, WSU. It focuses on tools for building abstract data types (using structure and class concepts in C++) and Object-Oriented Programming. We also begin the study of data structures in this course.

Note: *For all CS 241 students, concurrent registration into CS 241 lab is a must*

Prerequisites

CS 240 & MTH 229 (co-req) or equivalent.

Textbook

Big C++, C. Horstmann and T. Budd, Wiley, 2005 (required).

Language

Microsoft Visual C++.NET (also available in WSU Dunbar Library, with a fee).

Grading

The course grade will be the weighted sum of four grades. Grading will be straight scale (90-100 A, 80-89.9 B, 70-79.9 C, 60-69.9 D, below 60 F). These numeric thresholds may be lowered due to clustering, but will not be raised.

- **Programming Projects**

    There will be four programming assignments to be done individually and handed in by the due date mentioned in the class. No late submissions are accepted. Programs must be written well in a modular fashion with proper indentation, style, and documentation. Programs will be graded based on correctness, efficiency and documentation.

- **Laboratory Exercises**

    There is a lab section for this course, in which the students familiarize themselves with the concepts taught in the class or sometimes trying new concepts. Labs are handled by Graduate Teaching Assistants who will guide and check the student assignments. There will be eight laboratory assignments and each will include the following:

    - A prelab exercise due at the beginning of next lab section
    - An inlab assignment to be completed during the lab session

- **Examinations**

  There will be two midterms and one final exam. The midterms will be held during the 4th and 8th weeks of the quarter. Missed exams, if any, can be made up only in case of emergency or work conflicts and require proper supporting documentation. The final exam is scheduled during the final week of classes and all students are required to take it as per the announced schedule.

Work load	Weight (%)
4 Programming Projects (@ 9%)	36
8 Laboratory Exercises (@ 2.5%)	20
2 Midterms (@10%)	20
1 Final Exam	24

Academic dishonesty

Students are encouraged to share ideas by discussing with others. However, all the work you submit should be of your own. Submitting the code of others is regarded as cheating. All the students who are involved in such an activity will receive a grade of F. Also read and understand the WSU policy for academic honesty and integrity http://www.wright.edu/students/judicial/stu_integrity.html

Additional Information

Information regarding the course readings, assignments, labs and exams will be posted on the course web page. Students are expected to check the web page on a regular basis for any updates. The instructor reserves the right to modify any of the course policies, schedule and due dates.

Tentative Schedule

Week	Topic	Readings
1-2	Review of C++ Classes and OOP	Ch. 6
2	Review of Vectors and Arrays, Pointers	Ch. 9 & 10
3	Advanced Class Concepts and Constructs (friends, copy constructors and operator overloading)	Ch. 17
4	Memory Management Name Scope Management	Ch. 18 & 20
5	Recursion	Ch. 14
6	Basic Sorting and Searching (linear and binary search, simple sorting techniques)	Ch. 15
7, 8	Dynamic Memory Allocation and ADT List (self-referencing structures)	Ch. 16
9, 10	Inheritance and Polymorphism	Ch. 11 & 21
Final	Sec 02: Wednesday, March 15th, 1:00 – 3:00 PM Sec 03: Friday, March 17th, 8:00 – 10:00 PM	Everything!