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College of Engineering & Computer Science

Spring 2006

# CS 240: Introduction to Computer Science I

Praveen Kakumanu Wright State University - Main Campus

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### CS240: Introduction to Computer Science I Spring 2006

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#### **Course Description**

This course is the first in the three course sequence "Introduction to Computer Science" offered by the Computer Science department, WSU. This course presents a general introduction to C++ programming language. It introduces the <u>fundamental capabilities of C++ language as a problem solving tool</u>. Topics include <u>data representation</u>, <u>debugging</u> and <u>program verification</u>. Note: For all CS 24X students, concurrent registration into CS 24X lab is a must.

#### Prerequisites

MTH 130 & MTH 131; or MTH 134 (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 minimal 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 <u>four</u> programming assignments to be done individually and handed in by the due date mentioned in the class. <u>No late submissions are accepted</u>. <u>Partial credit is available</u>. So, always submit the work you have completed on the assigned due date. 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. The labs will be held in 346 RC. Labs are handled by Graduate Teaching Assistants who will guide and check the student assignments. There will be <u>eight</u> laboratory assignments and each might include the following a prelab exercise due at the beginning of the lab session and an inlab assignment to be completed during the lab session.

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#### Examinations

There will be two midterms and one final exam. The midterms will be held during the 4<sup>th</sup> and 8<sup>th</sup> 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 (@ 8%)	32
8 Laboratory Exercises (@ 2.5%)	20
2 Midterms (@14%)	28
1 Final Exam	20

#### 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 <a href="http://www.wright.edu/students/judicial/stu\_integrity.html">http://www.wright.edu/students/judicial/stu\_integrity.html</a>

#### 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. <u>The instructor reserves the right to</u> modify any of the course policies, schedule and due dates.

## **Tentative Schedule**

Week	Торіс	Readings
1	Introduction to Computers and Programming	Ch. 1, 2.1-2.4
	Microsoft VC++ Environment, Introduction to C++	Appendix F
	Basic Data Types, Variables and I/O	
2	Arithmetic and String Expressions	Ch. 2.5 – 2.6
3	Flow of Control (conditional decisions and iteration), Functions	Ch. 4, 5.1-5.6
4	Functions (contd.)	Ch. 5.1-5.6
5	Procedures and Software Design	Ch. 5.7-5.13
6	Advanced Flow of Control	Ch. 7
7	Testing and Debugging	Ch. 8, 9.1 – 9.5
8	1-D Vectors and Arrays	Ch. 9.1 – 9.5
9	Multiple-dimensional Vectors and Arrays	Ch. 9.5
10	Quick Introduction to Classes and Objects	Ch. 3, 6
Finals Week	Sec 01: Tuesday, June 8 <sup>th</sup> , 10:45 – 12:45 PM Sec 02: Monday, June 5 <sup>th</sup> , 5:45 –  7:45 PM	Everything!