Summer 2012

CS 242: Computer Programming III

Yong Pei

Wright State University - Main Campus, yong.pei@wright.edu

CS 242 Computer Programming III

4 Credits

Syllabus

Time/Place: Lecture: 2:45 – 4:00 PM, M. & W., RC 150

Instructor: Dr. Yong Pei, 489 Joshi Research Center
Tel. 937-775-5111, Email: yong.pei@wright.edu
Office Hours: 1:30-2:30 pm, M./W.

Prerequisites: (CS 241 and MTH 257) or CEG 221

Textbooks:

- **Required**: Data Structures & Other Objects Using C++, 4th Edition, by Michael Main and Walter Savitch, Addison-Wesley, 2010, ISBN: 978-0-13-212948-0
- **Recommended**: C++ How to Program, 8th Edition, by Deitel, Prentice Hall, 2011, ISBN: 978-0-13-266236-9
- **Recommended**: Absolute C++, 4th Edition, by Walter Savitch, Addison-Wesley, 2010, ISBN: 978-0-13-608381-8

Supplemental Readings:

- Lecture slides will be posted through PILOT.

Course Webpage: Through PILOT

SDK: Microsoft Visual C++
(Microsoft Visual Studio 2010 is available as a free download for WSU students at www.dreamspark.com or you can also use the express version available at http://www.microsoft.com/express/Windows/)

Workload:		
	4 Programming Assignments (@ %7.5)	30%
	1 Midterm Examination	25%
	8 Laboratory Projects (@3.75%)	30%
	1 Final Examination	25%

Grading: 90-110 A, 80-89.9 B, 70-79.9 C, 60-69.9 D, below 60 F

Lectures:

The following **tentative** schedule defines in greater details what material is covered in the course and when it is covered.

Week	Topics	Reading
1-2	Basic C++ Syntax I/O Streams Exception Handling	Chapter 1-3 Appendix F Appendix L
3	Dynamic Memory Allocation and Pointers	Chapter 4
4	Linked Lists (singly linked, doubly linked and circular)	Chapter 5
5	Templates, Iterators and Standard Template Library (STL), Inheritance, Polymorphism and Virtual Functions	Chapter 6 Chapters 14.1-14.3
6	Stacks and Queues Applications	Chapter 7-8
7-8	Recursion (Review) Binary Trees and Binary Search Trees	Chapter 9 Chapter 10
9-10	Sorting by insertion, selection and exchange Advanced Sorting Algorithms: Quicksort, Heapsort and Mergesort Searching (linear, binary and interpolation)	Chapter 12.1 Chapters 11.1 and 13