UNIVERSITY OF TEXAS AT DALLAS
SPRING 2002
CS-3335 – C/C++

Instructor: Hieu D. Vu (972)395-7741
E-Mail: hhieuvu@cs.com

Text Book: Deitel & Deitel. How to Program C++. Prentice-Hall 1994
ISBN # 0-13-117334-0

Class Attendance:

Students are expected to attend all classes and to be on time. Absences due to extenuating circumstances can be excused at the discretion of the instructor. There is no make up for exams for any absences. If you miss a class, it is your responsibility to acquire the information from other students or the instructor.

Assignments: (Homeworks, Programmings)

Late assignments will not be accepted unless with the permission of the instructor.

Exams:

There will be two exams and a final exam. You need permission from the instructor if you can not take the exam on a given day.

Course Description: Introduction to the C++ language, Control Structures: Selective if, if/else, for, do/while statements. Functions, Arrays: Sorting, Searching an array. Data Structures in C, Pointers and Strings.
Classes, Objects, Object Oriented Programming.

Course Objectives: After successfully and satisfactory complete the course, students should be able to:

1. Having a good knowledge about the C++ language.
2. Solving problems using the C++ language.
3. Object Oriented Programming Technique.

Grading:

Assessment Means	Percentage
Two Exams	30%
Five Programming Assignments	50%
Final Exam	20%

Grading Scale:	
90-100	A
80-89	B
70-79	C
60-69	D
00-59	F

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COURSE SYLLABUS

Week 1	Chapter 1: Introduction to Computer and C++ Programming, Computer Organization, Operating Systems, Machine, Assembly and High Level languages. Structured Programming. Information Assurance, Security and Controls.
Week 2, 3	Chapter 2: Control Structures, Algorithms, Pseudocode, The if, if… else selective structure, the while repetition structure, the for, switch, do… while statements. Logical operators. **Programming Assignment # 1 due.**
Week 4, 5	Chapter 3: Functions, Introduction, Program Components in C++, Math Library Functions, Recursion, Recursion vs. Iteration. In-line Functions. **Programming Assignment # 2 due**.
Week 6, 7	Chapter 4: Introduction, Arrays, Passing arrays to functions, Sorting arrays, Searching arrays: Linear and Binary search. Multiple-subscripted arrays. **Exam I** (End of week 6)
Week 8, 9	Chapter 5: Pointers and Strings. Pointer variables declaration and Initialization, pointer operators, Calling Functions by reference. Bubble Sort, pointer expressions and pointer arithmetic. Relationship Between pointers and arrays. **Programming Assignment # 3 due.**
Week 10, 11	Chapter 6: Classes and Data Abstraction, Structure definitions, User-defined Type Time with Struct, Class scope and accessing Class members, Controlling Access to members. Access Functions and Utility Functions. Initializing Class Objects: Constructors. Using Destructors. **Programming Assignment # 4 due.**
Week 12	Chapter 7: Classes. Introduction, Constant Objects and Member Functions, Friend Functions and Friend Classes. Using the **this** pointer. Static Class members. Data Abstraction. **Exam II**
Week 13	Chapter 8: Operator Overloading. Introduction, Fundamental of Operator Overloading, Restrictions. Operator Functions, Overloading Stream Insertion, Unary, Binary operators. **Programming Assignment # 5 due.**

Week 14	Chapter 9: Inheritance. Base Classes and Derived Classes. Protected Members. Using Member Functions. Overriding Base-Class Member. Public, Protected and Private Inheritance.
Week 15	Chapter 10: Virtual Functions and Polymorphism. Introduction, Type fields with switch statement. Virtual Functions . Abstract Base Classes and Concrete Classes. Polymorphism.
Week 16	Review course and **FINAL EXAM.**