
Computer Science 2620 • Advanced Programming

Course Outline • Spring 2003

Time of Lectures: MWF 12:00–12:50 pm (Section A) and 3:00–3:50 p.m. (Section B)

Instructor: Dr. S. Hossain

Text: *Problem Solving with C++, Fourth Edition*
by Walter Savitch

Method of Evaluation:

Assignments	25%	
Midterm Exam	25%	Fri. Feb. 14, 2003 10:00–10:50 a.m.
Two quiz tests	5% each	January and March (date to be announced)
Final Exam	40%	Fri. Apr. 25, 2003 9:00–12:00 noon Thu. Apr. 17, 2003 9:00–12:00 noon

Topics:

1. Brief introduction to Object-oriented design and standard libraries
 - vector, string
 - iostream library
2. Program performance, running time estimation
3. Recursion, sorting, searching
4. Designing and implementing classes
 - Member functions, constructors, destructors
 - Function and operator overloading
 - Namespaces
 - Exception handling (time permitting)
5. Storage types, dynamic memory management, pointers
6. Simple data structures
 - Containers and iterators
 - Linked lists, stacks, queues, and binary trees
7. Inheritance and polymorphism
 - Derived classes, abstract classes, pure virtual functions