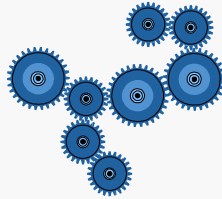


## Welcome to Computer Science 2704 Object-Oriented Software Design and Construction



### Instructors:

Instructor: William D McQuain  
 Email: mcquain@cs.vt.edu  
 Office: 631 McBryde Hall  
 Office Hours: 2:00-4:00 MW and 2:00 -3:00 F  
 and by appointment

### Course Description

Credits: 3  
 Prerequisites: CS 2574 or ECpE 2574  
 CS Majors must have completed the prerequisite with a grade of C or higher (C- is not acceptable). Students are also expected to have attained proficiency in the C++ programming language. There will be absolutely NO exceptions to these requirements.

### Purpose:

The purpose of this course is to provide a means for students to learn how to design and develop medium-large programming systems involving multiple modules using basic data structures and software engineering techniques.

### Texts:

#### Required:



*A Practical Introduction to Software Design with C++*, by Steven P Reiss, Wiley, ©1999  
*The C++ Programming Language*, 3rd Ed., by Bjarne Stroustrup, Addison Wesley, ©1997

#### Recommended:



*CS 2704 Course Notes, Spring 2000 Edition*, W D McQuain, ©2000 (as available)  
<http://courses.cs.vt.edu/~cs2704/>

#### Other Useful References:



*Programming in C++*, N. Dale, C. Weems & M. Headington, Jones and Bartlett Pub., ©1998  
*Data Abstraction and Problem Solving in C++: Walls and Mirrors*, 2nd Ed., by Carrano, Helman and Veroff, Addison Wesley, ©1998

*Object-Oriented Software Design and Construction with C++*, by Dennis Kafura, Prentice Hall, © 1998  
*CS 1704 Course Notes, Spring 2000 Edition*, N D Barnette & W D McQuain, ©2000  
<http://courses.cs.vt.edu/~cs1704/>

### Evaluation and Grading:

#### Point Distribution

Final grades will be based on the average achieved over the following :



Item	Weight	Tentative Dates
Project Testing and SE	40%	TBA
Homework and Quizzes	15%	TBA
Midterm Test	20%	TBA
Final Exam	25%	Tuesday, May 9, 1:05-3:05 (Locations TBA)

#### Grade Scale:

The usual 10-point scale will apply (subject to any curve). A final average of 90% will guarantee an A-, 80% will guarantee a B-, and so forth.



#### Curve

A grade curve may or may not be employed in this course. The application of a curve is dependent upon class performance on tests and homework. The decision to utilize a curve rests entirely with the course instructor. If a curve is applied, the Krider Curve will be used; see the course website for details.

## Class Organization

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### Sources for Help/Questions etc.

- CS 2704 Classmates:
  - CS 2704 Listserv for announcements & USENET news group for discussion
- CS 2704 GTAs
- CS 2704 Instructor



### C++ Language Help

#### CS 2704 USENET Newsgroup

- † Connect to: **vatech.class.cs2704**
- † CS 2704 GTAs & others will respond to questions.
- † A panel of "experts" will respond to questions.



#### CS 2704 ListServ

- † will be used for announcements from the course instructors

### Lecture Instruction

Lectures will consist of presentations, applications, problems and solutions interspersed with classroom discussion.



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## Development System

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### Test Environments

- All programming assignments submitted are required to compile under either Microsoft Visual C++, version 6.0 or the GNU g++ compiler installed on the FreeBSD machines in McB 124.
- Programs will be tested under either Windows NT or FreeBSD.
- It is the student's responsibility to ensure that his/her programs execute correctly in the appropriate environment.
- Points will be deducted for programs not meeting this requirement.
- GTAs do not have time to go to dorms, etc. to grade programs on specific systems.



### Program Demonstrations

- Demonstrations will take place in the McBryde CS Dept. Computer Lab for some assignments.
- Students may not bring their systems to the labs to execute their programs upon.



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## Development System

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### Backups

- Students are responsible for making backup copies of all their work in this course. Loss of work due to hard drive failure is **NOT** an acceptable excuse. Backup copies of files on the same hard drive are not backup copies. Backup copies of files on second hard drives are also risky. Backup copies should be maintained on two separate distinct storage mediums, (e.g., hard drives and floppies).
- Backup copies should be maintained until after the end of the term and students have received their course grade. (The Army lives by triplicate for a reason.)
- Remember: Computer systems are mechanical devices. Systems fail. Plan for it. It is inevitable!



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