Welcome to
Computer Science 3204
Operating Systems
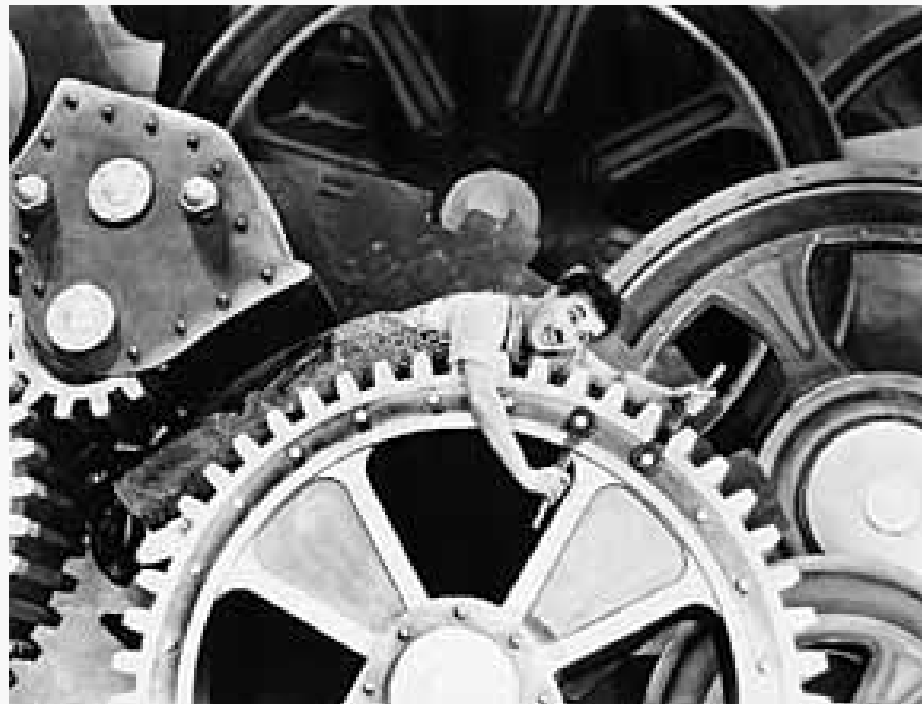
Charlie Chaplin, *Modern Times*

William D McQuain

Email:	`wmcquain@cs.vt.edu`
Office:	631 McBryde Hall
Office Hours:	10:00 – 11:00 MWF, 14:00 – 16:00 TR
	and by appointment

Jaishankar Sundararaman

Email:	`jaisunda@cs.vt.edu`
Office:	124 McBryde
Office Hours:	TBA

Xiaomo Liu

Email:	`xiaomliu@vt.edu`
Office:	124 McBryde
Office Hours:	TBA

CS 2604 or CS 2606

> ALL students must have completed this prerequisite with a grade of C or higher (C- is not acceptable).

CS 2504 or ECE 2504

> ALL students must have completed this prerequisite with a grade of C or higher.

> Note: students are expected to have prior proficiency in the C++ programming language, including the design and implementation of object-oriented systems.

> There will be absolutely NO exceptions to these requirements.

Evaluation

Final grades will be based on the average achieved over the following :
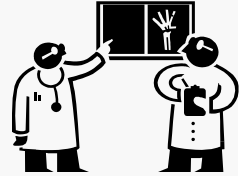
Item	Weight	Tentative Dates
Programming Projects	55%	See website
Quizzes	10%	Frequent
Midterm Test	10%	TBA
Final Exam	25%	10:05 – 12:05 Tuesday Dec 11

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.
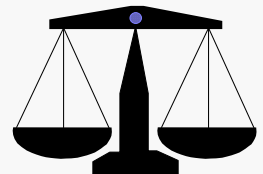
Curve

A grade curve may or may not be employed in this course.The application of a curve is dependent upon class performance on tests, projects and homework. The decision to utilize a curve rests entirely with the course instructors.

You will fail the class unless:

- You produce a working solution to Project 2 by the end of the semester. *Working* means that your deliverable must pass a to-be-defined set of tests.

- You show reasonable effort on Projects 3 and 4. A score of zero on any of these two projects clearly fails the reasonable effort test. Otherwise, we will use our best judgment as to what constitutes a reasonable effort.

Note that these requirements form a necessary, but not sufficient, condition for passing.

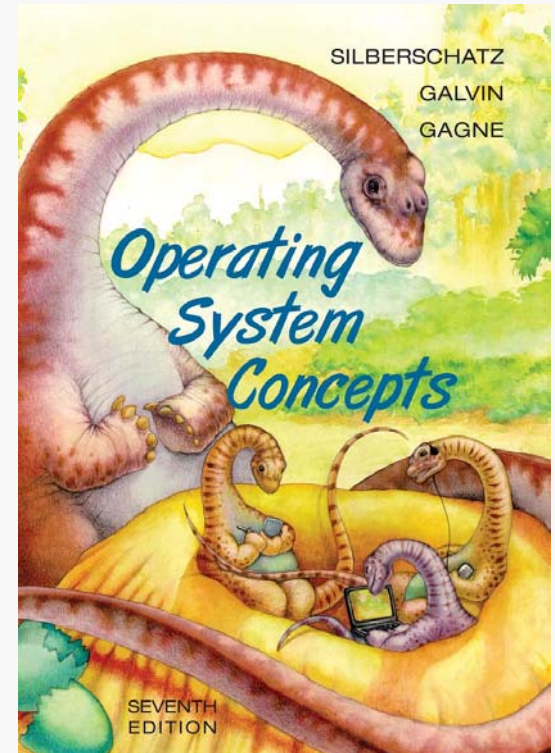Failing the class means a grade of F.

Required:

Operating Systems Concepts, 7th Edition

Silberschatz, Galvin and Gagne

Wiley, ©2005

ISBN 0-471-69466-5

Recommended:

CS 3204 Course Notes, Fall 2007 Edition
Notes from SSG

Available at the course website:

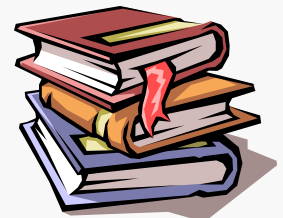**courses.cs.vt.edu/~cs3204/fall2007/wmcquain/**

C: How to Program, 5th Ed., by Deitel & Deitel, Prentice-Hall, ©2007
    ISBN: 0132404168

CS 2604 Course Notes, Fall 2005 Edition, W D McQuain,
    ©2005 at: **courses.cs.vt.edu/~cs2604**

S/E and Documentation Evaluation

All programming projects will be graded for adherence to good software engineering principles, including documentation, design, conformance to the stated specification, and programming style.

The Pintos projects will require that your group complete a design document template, which will be provided with the specification. That will be given significant weight in the evaluation of your solution.

We expect that every member of a project group will make an equitable effort to solve the problem. This does not mean that every member will necessarily contribute the same amount of code in the final solution, nor does it mean that every member will necessarily contribute the same amount to the final design of a solution. But every member is expected to interact with the rest of the group, to attend meetings scheduled by the group, and to understand the evolution of the eventual solution, and to understand that solution when it is completed.

In the event that a group member does not satisfy the expectations stated above, the other members of the group, after making reasonable efforts to resolve the situation, are required to report the problem to the course instructor. The course instructor will then call a meeting of the group members and resolve the situation. Note that the resolution may be to eject the offending member from the group or to assign him/her a proportional score on the project.

Test Environments

- All programming assignments submitted are required to compile under g++ version 4.1.1 running on Fedora Core 4, as installed in the McBryde 124 lab.

- Programs will only be tested under that environment.

- It is the student's responsibility to ensure that his/her programs execute correctly in the appropriate environment; programs that do not will receive substantial deductions.

Students developing on non-Linux systems, or using another C++ compiler are warned that there are many pitfalls and that they are YOUR responsibility.

Compliance with the ISO C++ Standard varies widely among older compilers, especially g++ prior to version 3.2.

Your programs WILL be tested with the environment listed above. If it fails to compile, or exhibits incorrect behavior, we don't care that it may compile elsewhere, or appear to run correctly elsewhere.

Due dates

Each programming project and homework assignment will have a due date and time and will include instructions for submission.

Quizzes

Makeup quizzes will not be given.

Projects

Each student will be provided with 4 virtual late vouchers. One late voucher can be used to purchase a 1-day extension on any project. Otherwise, late submissions will not be graded.

Extensions

Any request for an extension must be made, preferably by email, at least 24 hours prior to the due date.

Late submissions will not be given any credit if submitted after graded assignments or solutions have been released.

Statute of Limitations

Any questions about the grading of an assignment must be raised with your instructor within two weeks after the graded assignment has been made available to you.

Sources of Help for This Course

General Issues

- CS 3204 classmates
- CS 3204 Forum online at <u>forum.cs.vt.edu</u>
- CS 3204 TAs
- CS 3204 Instructors
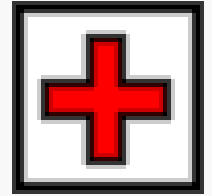
C++ Language Help

- CS 3204 Forum
- texts from earlier courses
- alt.comp.lang.learn.c-c++
- gnu.gcc.help, gnu.g++.help

Lecture Instruction

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

Backups

Students are responsible for making backup copies of all their work in this (and all) courses.

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 Zip disks).

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. Drives die. Bad sectors appear.

Network connections break.

Plan for it. It is inevitable!

An exhaustive list of Honor Code violations would be impossible to present here, but among other things, each of the following is a flagrant violation of the Virginia Tech Honor Code, and violations will be dealt with severely (Honor Court):

- Working with another student to derive a common program or solution to a problem, <u>aside from the other members of your project group.</u>

- Copying source code (programs) in whole or in part from someone else.

- Copying files from another student's disk or lab account, even though they might be unprotected.

- Editing (computer generated) output to achieve apparently correct results.

- Taking another person's printout from a lab printer, remote rprint printer, trash can, etc.

It is acceptable to discuss with classmates a programming assignment in a general way, i.e., to discuss the <u>nature</u> of the assignment. In other words, you may discuss with your classmates <u>what</u> your program is required to accomplish but <u>not how to</u> achieve that goal using C++. In no way should the individual statements of a program or the steps leading to the solution of the problem be discussed with or shown to anyone except those people cited in the following statement.

Feel free to discuss the homework assignments and your program source code with the teaching assistants assigned to CS 3204, the instructor, or the free tutors provided by UPE, or with the other members of your project group. The discussion of your program source code <u>must</u> be limited to these people. Note that this specifically excludes discussions of your program source code with other students (even if they are not enrolled in CS 3204), or with tutors except for those named above. Privately hired tutors are not an exception to this requirement, nor are athletic or other tutors provided by the University.

Copies of all submitted work are retained indefinitely by the Department. Submitted programs are subjected to automated analysis for detection of cheating.

If you have any question as to how the Honor Code applies to this class, remember that:

- Aside from the projects that explicitly require group work, any work done in this class must be done on an individual basis.

- All submitted work is archived. All submitted programs will be subjected to automated cheat analysis.

Evidence indicating the violation of the policies stated above will be submitted to the Honor Court.

It is much easier to explain a poor grade to parents or a potential employer than to explain an Honor Court conviction.

Students Re-taking CS 3204

Students retaking the class can use code that was created during previous offers only as a reference for themselves, but they are not allowed to share it with their new group members, be it electronically or otherwise. The submission for this semester has to be created from scratch by all group members. This policy includes students who withdrew from the class during Spring 2007.

Group Issues

You may discuss general concepts, such as software libraries, Internet resources, or class and text topics, with others outside your group. However, discussion of project solutions, specific code, or detailed report content is an Honor Code violation. All source material used in project code and reports must be properly cited.

Students within a group must contribute equally to the project. It is not acceptable for students to either not contribute to the project or not to let the other group members contribute equally to the project. Please bring any problems in this regard to my attention early on.

Security Issues

You are required to read-protect your work on shared file systems, so that students outside of your group will not have access to your files. Failure to do so is an Honor Code violation.

Restrictions

You may not post code that is part of your solution. The sole exception would be single lines of code along with the compiler/linker or runtime error message it causes. Posting debugging output, including backtraces is OK.

You must not post detailed descriptions of your design or solution to the Forum.

You may not post answers to design document questions to the Forum.

Forum Etiquette

Read and follow the guidelines posted on the Forum site. Aside from that, do not make useless or clearly unhelpful posts. Saying "me too" or "that should be obvious" would generally not be a good use of the Forum.