Semester:	Spring 2006
Course Number:	COSC 338.01
Course Title:	Computer Graphics
Prerequisites:	COSC 130
Meeting Times:	Mondays, Wednesdays and Fridays, 12:00pm to 1:10pm
Location:	Schaefer Hall, Room 134
Instructor:	Simon Read
Office Location:	Schaefer Hall, Room 174
Office Hours:	Mondays 10:00am-11:00am; Wednesdays and Fridays 11:00am-12:00pm; Wednesdays 1:20pm-2:30pm.
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Instant Messenger:	SimonSMCM@{jabber.org, aim.com, yahoo.com} sread@smcm.edu@msn.com
Class Web-Site:	http://courses.smcm.edu

Required Textbook:

"Interactive Computer Graphics – A Top-Down Approach Using OpenGL®", Edward Angel, 4th Edition, Addison-Wesley, 2006, ISBN 0-321-32137-5.

"OpenGL – A Primer", Edward Angel, 2nd Edition, Addison-Wesley, 2005, ISBN 0-321-23762-5.

Catalog Description:

This course is an introduction to three-dimensional computer graphics. Topics include: vector mathematics; perspective; clipping; hidden surface removal; polygon mesh rendering techniques; texture mapping; ray tracing; and animation.

Objectives:

At the end of this course you will be able to develop animated interactive three-dimensional applications in either Java, C or C++ using OpenGL. You will have an understanding of the principles behind the techniques used to render images of three-dimensional scenes. This will enable you to keep up with changes in this field, which is arguably the fastest developing in the discipline.

You will further develop critical-thinking skills that will allow you to evaluate technical alternatives and provide arguments for the best course of action.

You will enhance and demonstrate your ability to develop significant pieces of software.

You will have an additional project to add to your resume.

Methods of Instruction:

Assigned readings, lecture, class discussion and in-class activities will be used to convey the informational part of the course, to re-enforce that material and to develop critical thinking skills.

In-class multiple choice quizzes will support the assigned readings.

In-class examinations will be used to further develop critical thinking skills and to develop the use of the material in problem-solving.

Homeworks, drawn from the book, will re-enforce the factual material, develop problem solving skills by its practical application.

Interactions with the instructor outside scheduled class times will be an important part of your learning in this class. You should use the instructor's office hours as time to discuss concepts and homeworks.

Grading Criteria:

There are five elements to the grading of this class: a software development project, multiple choice quizzes, the examinations; the homeworks and participation in class.

You will take a mid-term examination (**1 hour, weight 10%**) and a final examination (**2 hours, weight 30%**). You may prepare a crib sheet for use in the examinations.

There will be weekly multiple choice quizzes based on the reading assignments (**weight 10%**). These will usually consist of 10 questions, occur in the first five minutes of the Monday class, be closed book and be administered through Blackboard.

There will be weekly homework based on the material covered that week (**weight 10%**). Homeworks will usually be assigned on Fridays and due prior to the start of class the following Friday.

You will complete a semester long programming project (**weight 30%**). You will be expected to submit a proposal, a design document, an initial release and a final release.

You will be expected to attend and participate in classes (**weight 10%**). I will be randomly selecting individuals for certain activities, and this will be used in part to assess class participation.

Policies:

Communications

This course uses the course management software Blackboard. This system will be used to provide: announcements concerning the class; assignments and model solutions; example programs used in class; external links to useful World Wide Web resources.

Your grades will be displayed on Blackboard. ***You*** are responsible for making sure that this grade sheet accurately reflects the grades given for each piece of work.

All assignments should be submitted electronically by email. You should keep a copy of every project on your G: drive. Programs must be submitted as either Eclipse or BlueJ

projects and must compile easily on common configurations (i.e. the instructor's).

Plagiarism

Students must be familiar with the "Student Code of Rights and Responsibilities'", as stated on pages 81-95 in the "To The Point Student Handbook", especially Article III Section 1. Not being familiar with your rights and responsibilities is no excuse. Any direct quotes and someone else's ideas or information *must* be referenced.

Incompletes

"An I (Incomplete) may be given by the instructor only at the request of the student when extraordinary circumstances, such as extended illness or other serious emergency beyond the control of the student, prevent the student from completing a course within the academic term. To qualify for an Incomplete, the extraordinary circumstances must have occurred near the end of the term and the student must have been attending the course regularly throughout the term up until that point."

- Academic Policies, St. Mary's College of Maryland, Catalog 2002-2003, p. 181

Late Submission

Except for unusual, documented circumstances assignments will not be accepted late.

Examinations

Unless otherwise stated, all examinations are 'in class', 'cumulative' and 'closed book'. Calculators are allowed, but must be 'cleared' before the examination starts. Students may use a 'crib sheet' during the examination. The 'crib sheet' may be: only one sheet of paper; written or printed on both sides; no larger than US letter sized. Preparing the 'crib sheet' is a helpful part of studying for the examination.

Grading

To earn a C grade, your work must show a strong understanding of the information presented in the course. To earn a B grade your work must show a strong understanding of the information presented in the course *and* an ability to apply this information in problem solving. To earn an A grade your work must show a strong understanding of the information presented *and* an exceptional ability to apply this information in problem solving.

Written materials will be judged with respect to writing quality as well as technical accuracy.   Papers are expected to meet or exceed accepted college English and scholarship standards.

Schedule:

The topics covered in classes, reading assignments, homework assignments and deadlines will be provided in-class or by email. It is your responsibility to check your email at least daily.