

## CS 1301 - Introduction to 3D Game Development

### Section 1

### Spring Semester 2008

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#### Course Information

<b>Instructor</b>	Steve Holtz
<b>Email</b>	sholtz@d.umn.edu
<b>Phone</b>	726-7664
<b>Office</b>	Heller Hall 319
<b>Office Hours</b>	Tuesday and Thursday 10:45 AM to 11:45 AM Wednesday 4:00 PM to 6:00 PM Friday 1:45 PM to 2:45 PM
<b>Course Web Site</b>	<a href="http://www.d.umn.edu/~sholtz/cs1301-1/s08/index.php">http://www.d.umn.edu/~sholtz/cs1301-1/s08/index.php</a>
<b>Teaching Assistants</b>	<u>Section 2</u> Darshan Paranjape    para0101@d.umn.edu
<b>Text(s)</b>	Gaddis, Tony. <i>Starting Out with Alice: A Visual Introduction to Programming</i> . 1 <sup>st</sup> Ed. Addison-Wesley, 2008. Rabin, Steven. <i>Introduction to Game Development</i> . Thomson Delmar Learning: Charles River Media, 2005.
<b>Clickers</b>	You are required to purchase (if you do not already own) a student response system (SRS) clicker in order to participate in <i>ConcepTests</i> during lecture. This will be an integral part of each lecture. More information on the use of clickers during this course follows.
<b>Lecture</b>	Section 1 - 9:30 to 10:45 AM on Tuesday and Thursday in LSci 175
<b>Lab</b>	Section 2 - 11:00 to 11:50 AM on Monday in MWAH 177

#### Course Prerequisite(s)

None.

#### Course Description

Introduces skills used to solve problems with computers. Students learn fundamental computer programming skills through a variety of contemporary applications, including creating dynamic web pages, programming robots, or animating 3D computer graphics.

#### Liberal Education

##### *Solving Problems with Computers*

satisfies a Liberal Education requirement under Category 3 - Communication, Computer Science, and Foreign Languages. Courses in this category develop the ability to use and analyze human and computer languages. Emphasis should be on the theory and/or development of skills in the methods of human and computer languages, and rhetoric.

#### Course Objectives

To give you a basic programmer's toolbox, while having fun developing solutions to interesting problems. You will begin by learning elements of procedural and object-oriented programming by creating animations in a 3 dimensional environment. Then, we will create simple computer games in a powerful, real-world 3D modeling and animation package.

#### Policies

<b>Exams</b>	<ul style="list-style-type: none"> <li>• Exams are closed book, closed calculator, and closed notes.</li> <li>• The two hour final exam is cumulative.</li> <li>• It is departmental policy not to return final exams.</li> <li>• No make-up exams will be given without the prior consent of the instructor.</li> </ul>
<b>Lectures</b>	<ul style="list-style-type: none"> <li>• Lectures will focus around <i>ConcepTests</i>, a teaching tool developed by Physics Professor Dr. Eric Mazur of Harvard University.</li> <li>• A <i>ConcepTest</i> is a multiple choice question posed during lecture that is designed to challenge your understanding of a concept that was just covered. The student response system (SRS) clickers will be used to implement the <i>ConcepTests</i>.</li> <li>• <i>ConcepTests</i> are not graded. Whether you answer correctly or incorrectly will not affect your grade. However, your participation in <i>ConcepTests</i> will be tracked and can affect your grade (see grading policies below).</li> <li>• You will be required to read the assigned reading material before each lecture session. Not all of the assigned reading material will be covered during lecture. However, you are responsible for knowing all of it (i.e. this material <i>can</i> show up on the exams).</li> </ul>
<b>Reading Quizzes</b>	<ul style="list-style-type: none"> <li>• A reading quiz, consisting of 3 questions, will be held in the 24 period ending prior to each lecture period. The quiz will cover the material that you are responsible to have read in preparation for that lecture.</li> <li>• Reading quizzes will not count directly toward your grade, but they can have an affect your grade through extra credit points (see grading policies).</li> <li>• Each quiz will be graded as follows:</li> </ul>

- 3 points - you are well read.
- 2 points - you have read the material.
- 1 point - you probably just skimmed over the material.
- 0 points - you evidently didn't read the material.
- Reading quizzes will be held via TestPilot from the course Web site, where they will be available for approximately 24 hours before each lecture.
- Reading quizzes cannot be made up for any reason. They do not directly affect your grade and thus there is no reason to make them up.
- You will not be reminded about the reading quizzes. It is your responsibility to go on-line and take these quizzes before each lecture.

### Extra Credit

- Extra credit (EC) points are earned through participating in:
  1. Reading Quizzes
  2. *ConceptTests*
- EC points are applied in two ways:
  1. Directly to your final score.
  2. As a weight applied to your final exam (thus effectively reducing the weight of the final exam). See grading policy.

### Grading

What	Weight	Date
Midterm 1	15	Thu, February 14 <sup>th</sup> , 9:30 to 10:20 AM
Midterm 2	17.5	Thu, March 13 <sup>th</sup> , 9:30 to 10:20 AM
Midterm 3	15	Thu, April 17 <sup>th</sup> , 9:30 to 10:20 AM
Final Exam	22.5	Wed, May 14 <sup>th</sup> , 8:00 to 9:55 AM
Labs (11)	30	See course schedule
Extra Credit	5	See policy below
<b>Total Weight</b>	<b>100</b>	

To calculate your current Total Weight, use the following worksheet:

	Actual Scores (AS)	Running Total of Actual Scores (RAS)	Maximum Points per Assignment (MP)	Running Total of Maximum Points (RMP)	Section Percentage
Lab 1					<b>L</b> = RAS/RMP
Lab 2					
Lab 3					
Lab 4					
Lab 5					
Lab 6					
Lab 7					
Lab 8					
Lab 9					
Lab 10					
Lab 11					
Reading Quizzes					<b>RQ</b> = AS/MP
<i>ConceptTest</i>					<b>CT</b> = AS/MP
Midterm 1					<b>M1</b> = AS/MP
Midterm 2					<b>M2</b> = AS/MP
Midterm 3					<b>M3</b> = AS/MP
Final					<b>F</b> = AS/MP

Calculate the Section Percentage for each row by dividing the appropriate column totals indicated by the equation in this column. For example, assuming that in the lab row we have the RAS column showing a total sum of 78 and the RMP column showing a total sum of 90, then to calculate the L Section Percentage, we have  $L = RAS/RMP = 78/90 = 0.867$ .

Calculate your extra credit (EC) points as follows. EC points are earned through participation in *ConceptTests* (CT) applied to your reading quiz (RQ) scores. If your CT percentage is:

- From 0.8 up to and including 1.0 [80% to 100%], then RQ is applied 100 percent toward your EC points.
- From 0.5 up to (and excluding) 0.8 [50% to 80%), then the CT percentage is applied as a weight on RQ toward your EC points.
- From 0.0 up to (and excluding) 0.5 [0% to 50%), then you get no EC points (EC = 0).

For example: Suppose your CT computes to 0.8 (you've participated in 80% of the *ConceptTests*) and your RQ is 0.692 (you've earned 83 out of a possible 120 on the reading quizzes). Then, RQ counts 100%, and your EC points are calculated as:  $EC = RQ = 0.692$ .

Another example: Suppose your CT computes to 0.65 (you've participated in 65% of the *ConceptTests*) and your RQ is 0.958 (you've earned 115 out of 120 points on the reading quizzes). Then, RQ only counts 65%, and your extra credit point:  $EC = CT * RQ = 0.65 * 0.958 = 0.623$ .

A third example: Suppose your CT computes to 0.48 (you've participated in 48% of the *ConcepTests*). Then your EC points are zero no matter what score you've earned on your reading quizzes.

Plug the results in the last column into the expression below and solve for `TotalWeight`.

$$\text{TotalWeight} = L * 30 + M1 * 15 + M2 * 17.5 + M3 * 15 + EC * 5 + F * (22.5 - EC * 5)$$

You can also use the [Grade Estimator](#). This tool is available from the course Web site.

Final grades are based on your `TotalWeight` with:

- A- cutoff at 90
- B- cutoff at 80
- C- cutoff at 70
- D cutoff at 60
- F is below 60

These cutoffs may be lowered, but they will not be raised.

Scores will be posted on the "Grades" page of the course Web site: <http://www.d.umn.edu/~sholtz/cs1301-1/s08/grades/index.html>. You will be required to enter your UMD X.500 (e-mail) username and password to access your scores.

**Syllabus or Schedule Revision** The instructor reserves the right to make changes to the course syllabus or schedule at any time. Revisions will be posted on the course Web site and announced during lecture.

**Course Material** You are responsible for reading assigned textbook material and for obtaining any material covered in lecture and lab, including:

- lecture notes.
- assignments and handouts.
- turning in lab assignments.
- viewing films (if any).

**Missed Class Sessions** If you are unable to attend a class meeting (lecture or lab), it is your responsibility to obtain any notes, assignments, and extra copies of handouts from a fellow student.

If you must miss a class meeting where an assignment must be turned in, you should either:

- turn in the assignment early.
- prearrange the absence with the instructor.

**Academic Dishonesty** Many of the assignments in this course will involve working in small groups. For these assignments you will be required to put your name and the name(s) of your collaborator(s) on the paper that you turn in. Each assignment will have some aspect that must be done individually. Thus, you will always turn in individual copies of each assignment.

For some of the assignments, you will be required to do your own work. For these assignments, submissions that are overly similar could result in the involved individuals to called into the instructor's office and possible plagiarism charges imposed. The repercussions resulting from these charges will vary on a per-case basis and can be turned over to the University as a charge of academic dishonesty.

Academic dishonesty tarnishes UMD's reputation and discredits the accomplishments of students. UMD is committed to providing students every possible opportunity to grow in mind and spirit. This pledge can only be redeemed in an environment of trust, honesty, and fairness. As a result, academic dishonesty is regarded as a serious offense by all members of the academic community. In keeping with this ideal, this course will adhere to UMD's Student Academic Integrity Policy, which can be found at <http://www.d.umn.edu/assl/conduct/integrity/>. This policy sanctions students engaging in academic dishonesty with penalties up to and including expulsion from the university for repeat offenders.

**Student Conduct** The instructor will enforce and students are expected to follow the University's Student Conduct Code (<http://www.d.umn.edu/assl/conduct/code/>). Appropriate classroom conduct promotes an environment of academic achievement and integrity. Disruptive classroom behavior that substantially or repeatedly interrupts either the instructor's ability to teach, or student learning, is prohibited. Disruptive behavior includes inappropriate use of technology in the classroom. Examples include ringing cell phones, text-messaging, watching videos, playing computer games, doing email, or surfing the Internet on your computer instead of note-taking or other instructor-sanctioned activities.

## Assignments

### Expectations

You are expected to:

- Attend all lecture and lab sessions.
- Put forth your best effort on all group oriented work. If all members of the group put their best effort forward, every member will benefit from these assignments.
- Do your own work on all individual portions of assignments and all assignments that have been designed for individual work only.
- Feel free to ask and answer code related questions of your fellow students. When you and a fellow student work in this way, you are considered to be "collaborators" and you should report each other as such on the cover sheets to your assignments.
- Start all programming-related assignments early so you have ample time to resolve any difficulties.
- Delete **all** files from public lab machines when you are done working on them, including emptying the trash bin. While

you will be able to collaborate with fellow students on assignments, you will do this in a structured way that will increase the amount that each collaborator learns through the interaction. You do not want to just "give" your code away to someone else.

- NEVER place any of your work on a Web server. Even in a "secret" directory for "just" a couple of minutes.
- You should expect to put 12 hours per week (on average) into this course [3 hours of your time for each credit hour]. This includes attending three hours of lecture and one hour of lab each week. So, you should expect to spend 8 hours per week working on course-related material outside of the formally scheduled course time.

### Help

If you need help with a project, start with:

1. course materials, such as text, notes, and previous assignments.
2. the TA on duty in HH 314 or MWAH 177.
3. your own TA during their office hours.
4. the instructor during office hours.

When e-mailing for assistance with a problem, you must include:

- the course (cs1301) and your lab section number (sec 3) in the subject of your e-mail.
- **ALL** of your source code in your e-mail (attachments work well).

### Submissions

All assignment submissions during this course will be via Web drop. This will be outlined at the end of each assignment write-up.

### Late Work

Late work will be handled as follows, assignments:

- turned before the beginning of the class session on the due date - full credit.
- turned in any later time on the due date or the next day - 25% deduction.
- after one day late - zero points.

The timestamp on the last Web drop submitted will be used to determine when an assignment has been turned in.

Word of wisdom: Start programming your solution to an assignment **early!**

The instructor's consent is mandatory for extensions to assignment due dates. Do **NOT** approach your teaching assistant to obtain a due date extension.

### Assignment Points

In order to earn points, each assignment must exceed a threshold of 40% of available points.

## Equal Opportunity

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. As your instructor, I am committed to upholding University of Minnesota's equal opportunity policy. I encourage you to talk to me in private about any concerns you have related to equal opportunity in the classroom. To inquire further about the University's policy on equal opportunity, contact the [Office of Equal Opportunity](#), 255 DAdB, phone: 726-6827, email: [equaloo@d.umn.edu](mailto:equaloo@d.umn.edu).

## Students with Disabilities

If you have any disability (either permanent or temporary) that might affect your ability to perform in this class, please inform me at the start of the term. I may adapt methods, materials, or testing so that you can participate equitably. To learn about the services that UMD provides to students with disabilities, contact the [Access Center/Disability Services](#) 138 Kirby Plaza, phone: (2318) 726-8217 or TTY (218) 726-7380, email: [access@d.umn.edu](mailto:access@d.umn.edu).

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