



Course CS 3360.501.13S
Professor J. Steven Kirtzic
Term Spring 2013
Meetings Tuesday & Thursday, 7:00pm – 8:15pm ECSN 2.126

Professor's Contact Information

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Other Phone 214-392-1971
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Email Address jsk061000@utdallas.edu
Office Hours 6pm – 7pm, Tuesday & Thursday

TA Savio Monteiro
Office Location ECSS 4.409
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Office Hours 2pm – 3pm, Friday

Other Information

I don't regularly check eLearning e-mail, so if you need to reach me please e-mail me at the above e-mail address. For any general announcements, however, I will post them in the "Announcements" section on eLearning. I will also try to post announcements on my webpage, but in some circumstances that may not always be possible.

Webpage: www.utdallas.edu/~jsk061000

General Course Information

Pre-requisites, Co-requisites, & other restrictions Prerequisite: CE/CS 1336/1337 and CE/CS 2335/2336)
(No knowledge of linear algebra assumed)

Course Description

Device and logical coordinate systems, and the nature of raster display. Algorithms for basic 2-D drawing primitives, such as line-drawing, clipping and Bezier curves. Perspectives in 3-D, and hidden-face elimination, such as Painter's and Z-Buffer algorithms. Color and texture. Fractals and the Mandelbrot set. ECS majors cannot receive credit for this course.

Learning Outcomes

After successful completion of this course, the student should have the ability to:

1. Have a solid understanding of computer numbering systems
2. Have a solid understanding of pixels and coordinate systems
3. Understand algorithms for 2D drawing primitives
4. Understand perspective in 3D
5. Understand color theory and texture

- 6. Have experience with fractals and the Mandelbrot Set
- 7. Be familiar with Java 3D

Required Texts & Materials **“Computer Graphics for Java Programmers, 2nd Edition”**,
Leen Ammeraal and Kang Zhang, John-Wiley & Sons, 2007. ISBN
 978-0-470-03160-5

Suggested Texts, Readings, & Materials **“Introduction to Java Assignment Programming, 9th Edition”**,
Y. Daniel Liang, Prentice Hall,
 2011. ISBN 0-13-213080-7

“Head First Java, 2nd Edition”, *Kathy Sierra and Bert Bates*,
 O’Reilly, 2005. ISBN 10: 0596009208

Assignments & Academic Calendar

Exams: There will be three exams during the course: two midterms and a final exam. The exams will be closed book, but will be mainly limited to material covered during the immediate unit. Test material will be taken primarily from classroom lectures and assignments. The final will be somewhat cumulative.

Assignments: There will be regularly assigned reading and four homework assignments. Reading assignments should be done before the class session. Homework will require the student to spend time implementing a class topic outside of class, either in a written assignment and/or a programming assignment. All assignments should be submitted using your eLearning account. Each programming assignment must contain the following:

- 1. A text copy of all source code including its documentation (.java)
- 2. A file showing test cases for your programs input and displayed output (.doc)
- 3. Copies of all Java executable code (.class) files needed to execute the program.

Midterm 1: 20%

Midterm 2: 20%

Final: 35%

Assignments: 25%

Extra credit: ?

Week	Topics covered
1 – 2	Numbering systems
3	Introduction to Computer Graphics (Pixels and coordinate systems) (Ch. 1)
4 - 5	Algorithms for 2D drawing primitives (Ch. 4), midterm review,

Midterm 1

6 - 7 Perspective in 3D (Ch. 5)

8 - 9 Hidden-face elimination (Ch. 7)

10 - 11 Color theory and texture (Notes)

12 - 13 Fractals and Mandelbrot set (Ch. 8), Midterm review, **Midterm 2**

14 - 15 Introduction to Java 3D (Notes)

16 Advanced topics (time permitting), Final review

Final Exam Tuesday, May 7th, 8:00pm – 10:45pm, FO 1.502 (subject to change at my whim)

*Please note that all of the above class topics and exam dates are subject to change. Changes will be announced in class, in the Announcements section of eLearning, and on my webpage.

Course Policies

Grading (credit) Criteria	The grade each student earns from this class will be based on the following table: Grades are assigned according to this scale: A: 93.0 – 100 A-: 90.0 – 92.9 B+: 87.0 – 89.9 B: 83.0 – 86.9 B-: 80.0 – 82.9 C+: 77.0 – 79.9 C: 73.0 – 76.9 C-: 70.0 – 72.9 D+: 67.0 – 69.9 D: 60.0 – 66.9 F: Below 60.0
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	<p><i>Non-programming assignments:</i> Point values as indicated (partial credit may be available)</p> <p><i>Programming assignments:</i> Code Development 30% (compile w/o error) Program Execution 20% (run successfully) Program Design 25% (conform to spec) Documentation 15% (program, comments) Coding Style 10% (clear, efficient)</p>
Make-up Exams	There will be no makeup exams under normal circumstances.
Extra Credit	Extra credit may be available in the form of pop quizzes
Late Work	10% per day penalty up to 1 week from due date; no longer accepted after 1 week
Special Assignments	TBD
Class Attendance	Class attendance is not required although HIGHLY suggested (think “pop quiz”)
Classroom Citizenship	Class participation is highly encouraged and may make a difference in your final grade if you are borderline
Field Trip Policies	Sadly, no field trips are currently planned for this class, except, perhaps, to the Open Lab (weather permitting)
Student Conduct and Discipline	<p>The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, <i>A to Z Guide</i>, which is provided to all registered students each academic year.</p> <p>The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the <i>Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3</i>, and in Title V, Rules on Student Services and Activities of the university’s <i>Handbook of Operating Procedures</i>. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).</p> <p>A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents’ Rules, university</p>

	<p>regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.</p>
<p>Academic Integrity</p>	<p>The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.</p> <p>Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.</p> <p>Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.</p>
<p>Email Use</p>	<p>The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.</p>
<p>Withdrawal from Class</p>	<p>The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal</p>

	<p>requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.</p>
<p>Student Grievance Procedures</p>	<p>Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's <i>Handbook of Operating Procedures</i>.</p> <p>In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.</p> <p>Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.</p>
<p>Incomplete Grades</p>	<p>As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of F.</p>
<p>Disability Services</p>	<p>The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.</p>

	<p>The contact information for the Office of Disability Services is: The University of Texas at Dallas, SU 22 PO Box 830688 Richardson, Texas 75083-0688 (972) 883-2098 (voice or TTY)</p> <p>Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.</p> <p>It is the student’s responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.</p>
<p>Religious Holy Days</p>	<p>The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.</p> <p>The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.</p> <p>If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is</p>

	<p>similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.</p>
<p>Off-Campus Instruction and Course Activities</p>	<p>Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean.</p>

These descriptions and timelines are subject to change at the discretion of the Professor.