



**I. Locator Information**

Semester: Fall 2011  
Instructor: Dr. Albert Chan  
Course Number: CSC451  
Course Name: Computer Graphics  
Semester Credit Hours: 3 Credit Hours (3-3-0)  
Class Day/Time/Location: MW 09:00-09:50 (SBE218) and F 09:00-09:50 (SBE106)  
Office Location: SBE345  
Office hours: MWF 10:00-12:00 and MW 14:00-15:00  
Office Phone: (910) 672-1517  
Email address: achan@uncfsu.edu

**FSU Policy on Electronic Mail:** Fayetteville State University provides to each student, free of charge, an electronic mail account that is easily accessible via the Internet. The university has established email as the primary mode of communicating with enrolled students about impending deadlines, upcoming events, and other information important to student progression at the university. Students are responsible for reading their email on a regular basis to remain aware of important information disseminated by the university. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail.

Students making inquiries via email to FSU faculty and staff about academic records, grades, bills, financial aid, and other matters of a confidential nature are required to use their FSU email account.

Rules and regulations governing the use of FSU email may be found at: <http://www.uncfsu.edu/PDFs/EmailPolicyFinal.pdf>.

Note: all emails sent to the instructor must begin with the phrase "CSC451" in the subject line or the emails will be deleted by automatic spam filter and the instructor will not see the email at all.

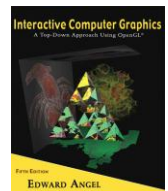
**II. Disabled Student Services**

In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ACA) of 1990, if you have a disability or think you have a disability, please contact the Center for Personal Development in the Spaulding Building, Room 155 (1st Floor); 910-672-1203.

**III. Course Description:** This course introduces hardware and software components of graphics systems, and graphic application programming. Programs to deepen understanding of interactive graphics, picture plotting and input handling in an integrated manner will be written. Topics include geometrical transformation, three-dimensional concepts, windowing, clipping, segmentation, logical interaction input methods, raster algorithms, algorithms for hidden surface and hidden line removal, and shading and color. *Prerequisite: CSC 220, MATH 240, and MATH251.*

**IV. Textbook:**

Author: Angel  
Title: Interactive Computer Graphics: A Top-Down Approach Using OpenGL®  
Edition: 5<sup>th</sup> edition  
Publisher: Addison-Wesley  
Year: 2009  
ISBN-13: 978-0-321-53586-3



**V. Learning Outcomes:** Upon completion of this course, students will be able to:

- Understand the computer graphics system and the elements of graphics programming.
- Use off-the-shelf package to create computer-generated graphics.
- Handle the user input and interaction.
- Describe geometric objects and perform transformation on these objects.
- Rendering images on computer output devices.

**VI. Course Requirements and Evaluation Criteria**

The course is evaluated based on the following criteria:

- Assignments: 30%
- Tests: 30%
- Project: 30%
- Class participation: 10%

Penalties for late assignment submission:

- 0% before due date.
- 20% within one week.
- Submission will NOT be graded if submitted one week after due date.

Extra Credits:

- 2% for a pre-course survey – you have to finish it before August 31.
- A bonus point will be given for every five (5) consecutive perfect attendance (arrive on time, no early departure), your final grade will be increased by one percent for every two points accumulated.

Final grades are calculated on a four-point system and affect a student’s grade point average as indicated below. The methods and evaluative criteria for determining final grades in the class are delineated above.

Total	Grade	Credit Hours	Quality Points	Meaning
90-100%	A	Hours attempted and earned	4 per credit hour	Exceptionally high
80-89%	B	Hours attempted and earned	3 per credit hour	Good
70-79%	C	Hours attempted and earned	2 per credit hour	Satisfactory
60-69%	D	Hours attempted and earned	1 per credit hour	Marginally passing
0-59%	F	Hours attempted - Not earned	0 per credit hour	Failing
Other grade maybe assigned according to the Undergraduate Catalog				

- Students who do not show up in class for the first week will be assigned an interim grade of “X”.
- During the first half of the semester, the instructor will assign an interim grade of “EA”, Excessive Absences, for students who have been absent for more than 10% of the course contact hours (that is, 5 absences or more). Students receiving an “EA” interim grade should either withdraw from the course, or resume attending classes immediately. The EA grade is not a final grade, students who are assigned an interim grade of EA, but do not withdraw from the class, will receive a final grade based on the evaluation criteria for the class.

**VII. FSU Policy on Disruptive Behavior in the Classroom**

The *Code of the University of North Carolina* (of which FSU is a constituent institution) and the *FSU Code of Student Conduct* affirm that all students have the right to receive instruction without interference from other students who disrupt classes.

FSU Core Curriculum Learning Outcome under Ethics and Civic Engagement (6.03): All students will “prepare themselves for responsible citizenship by fulfilling roles and responsibilities associated with membership in various organizations.” Each classroom is a mini-community. Students learn and demonstrate responsible citizenship by abiding by the rules of classroom behavior and respecting the rights all members of the class.

The FSU Policy on Disruptive Behavior (see FSU website for complete policy) identifies the following behaviors as disruptive:

- Failure to respect the rights of other students to express their viewpoints by behaviors such as repeatedly interrupting others while they speak, using profanity and/or disrespectful names or labels for others, ridiculing others for their viewpoints, and other similar behaviors;
- Excessive talking to other students while the faculty member or other students are presenting information or expressing their viewpoints.
- Use of cell phones and other electronic devices
- Overt inattentiveness (sleeping, reading newspapers)
- Threats or statements that jeopardize the safety of the student and others
- Failure to follow reasonable requests of faculty members
- Others as specified by the instructor.

The instructor may take the following actions in response to disruptive behavior. Students should recognize that refusing to comply with reasonable requests from the faculty member is another incidence of disruptive behavior.

- Direct student to cease disruptive behavior.
- Direct student to change seating locations.
- Require student to have individual conference with faculty member. At this meeting the faculty member will explain the consequences of continued disruptive behavior.
- Dismiss class for the remainder of the period. (Must be reported to department chair.)
- Lower the student’s final exam by a maximum of one-letter grade.
- File a complaint with the Dean of Students for more severe disciplinary action.

Students who believe the faculty member has unfairly applied the policy to them may make an appeal with the faculty member’s department chair.

**VIII. Academic Support Resources**

- Microsoft® Visual Studio 2008 will be used for programming – more information will be made available during the course.
- As a student of this course, you are entitled to download a personal copy of Microsoft® Visual Studio 2005 or 2008 (or both) and have it installed on your computer. This is available under the MSDNAA program. However, you need to fill-in an application form and return it to me in order to obtain access to the software. For more information, refer to the MSDNAA page from the departmental web page (<http://www.uncc.edu/macsc>). Please note that Microsoft® Visual Studio requires 3-4GB of hard drive space and it may not run well on older machines.
- Python is open source software and can be obtained at <http://www.python.org>
- All course material will be available on the Blackboard system.

**IX. Course Outline and Reading Schedule**

The following is a tentative schedule:

Week	Dates	Lecture	Assignments	Tests
Week 1	Aug 18 – Aug 19	Introduction		
Week 2	Aug 22 – Aug 26	C Primer		
Week 3	Aug 29 – Sept 02	Python Primer	Assignment 1	
Week 4	Sep 05 – Sept 09	Chapter 1		
Week 5	Sep 12 – Sept 16	Chapter 2		Test 1 (September 14) (C/Python and Chapter 1)
Week 6	Sep 19 – Sept 23	Chapter 2	Assignment 2	
Week 7	Sept 26 – Sept 30	Chapter 2		
Week 8	Oct 03 – Oct 07	Chapter 3		
Week 9	Oct 10 – Oct 14	Chapter 3	Assignment 3	
Week 10	Oct 17 – Oct 21	Chapter 3		
Week 11	Oct 24 – Oct 28	Chapter 4		Test 2 (October 26) (Chapters 2/3)
Week 12	Oct 31 – Nov 04	Chapter 4	Assignment 4	
Week 13	Nov 07 – Nov 11	Chapter 4		
Week 14	Nov 14 – Nov 18	Chapter 12		
Week 15	Nov 21 – Nov 25	Chapter 12	Assignment 5	
Week 16	Nov 28 – Dec 02	Chapter 12		Test 3 (November 30) (Chapters 4/12)
Remarks:	No classes on the following dates: 1. Monday September 05 – Labor Day Holiday 2. Monday October 17 – Semester Break 3. Friday November 11 – Veteran’s Day 4. Friday November 25 – Thanksgiving Holiday All tests are on Wednesdays of the scheduled weeks. Project presentation must be held during the final examination time slots scheduled by the University. • Wednesday December 7, 2011 08:00-09:50 (tentative – subject to change) Graduating Seniors will be presenting their projects during the last class session (December 02). Student should ensure his/her availability during the examination week (December 05 to 09).			

**X. Continuity of Instruction.** In case FSU must close for an emergency during the semester, meeting will continue online.

**XI. Teaching Strategies**

The primary teaching strategies for this course will be mainly lecture, and classroom discussion.

**XII. Bibliography**

- Angel, “OpenGL® A Primer,” Addison Wesley, 2008.
- Forouzan and Gilberg, “Computer Science: A Structured Programming Approach Using C,” Brook/Cole, 2001.
- Goldwasser and Letscher, “Object-Oriented Programming in Python,” Addison-Wesley, 2008.