

Course Syllabus

EGCI 301 Computer Graphics

1. **Program of Study** Bachelor of Engineering Program in Computer Engineering (International Program)
2. **Course Code/Title** EGCI 301 Computer Graphics
3. **Number of Credits** 4(4-0-8) Credit (Lecture – Lab – Research)
4. **Prerequisites** EGCI 111
5. **Type of Course** Major Course (Elective Major)
6. **Session / Academic year**
This course will be offered every third trimester, starting with the academic year 2008.
7. **Course Conditions** Class size will be in the range of 5-40 students.

8. Course Description

Principles of computer graphics, graphics systems and models, graphics programming, graphic devices and their controls, color model, geometric objects and transformations, viewing, shading, clipping, and hidden-surface removal.

9. Course Objectives

Upon completion of this course, students should be able to

1. Explain basic principle of computer graphics.
2. Develop 2D and 3D computer graphics applications.
3. Specify lighting and object's materials in computer graphics programming.

10. Course Outline

Week	Topics	Hours	
		Lecture	Lab.
1-2	Graphic Programming	8	
3	Interactive Graphics	4	
4	2D Geometric Objects	4	
5	3D Geometric Objects	4	
6-7	Transformation and Geometric objects	8	
8	Viewing	4	
9-10	Shading	8	
11	Clipping and Hidden-Surface Removal	4	
	Final examination		
	Total	44	

11. Teaching Method

Lecture, discussion and e-learning.

12. Teaching Media

Lecture files (PPT or PDF), whiteboard, computer, and LCD projector.

13. Measurement and Evaluation of Student Achievement

Student's achievement will be evaluated according to the faculty and university standard, using the symbols: A, B, B+, C, C+, C, D+, D and F.

Grading Scale:

Grading scale	Grade	Point
90 - 100	A	4.0
85 - 89	B+	3.5
80 - 84	B	3.0
75 - 79	C+	2.5
70 - 74	C	2.0
65 - 69	D+	1.5
60 - 64	D	1.0
Below 60	F	0

Weight:

- Assignments and quizzes	20%
- Project	30%
- Midterm Exam	20%
- Final Exam	30%
Total	100 %

14. Course Evaluation

- 14.1 Evaluate as indicated in number 13 above.
- 14.2 Evaluate student's satisfaction towards teaching and learning of the course using a questionnaire.

15. References (Recommended Reading)

- Interactive Computer Graphics: A Top-Down Approach Using OpenGL, Edward Angel, fifth Edition, Addison-Wesley 2008
- The Red Book - OpenGL Programming Guide, sixth edition, Dave Schreiner, Mason Woo, Jackie Neider, and Tom Davis
- Foundations of 3D Graphics Programming: Using JOGL and Java3D by Jim X. Chen and Edward J. Wegman

16. Instructor(s)

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17. Course Coordinator

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