

Syrian Arab Republic	 الجامعة الافتراضية السورية SYRIAN VIRTUAL UNIVERSITY	الجمهورية العربية السورية
Ministry of Higher Education		وزارة التعليم العالي
Syrian Virtual University		الجامعة الافتراضية السورية

Course Description: **Course Name**

1- Basic Information:

Course Name	CG
Course ID
Contact Hours (Registered Sessions)	16
Contact Hours (Synchronized Sessions)	16
Mid Term Exam	-
Exam	75 min
Registered Sessions Work Load	16
Synchronized Session Work Load	16
Credit Hours

2- Pre-Requisites:

Course	ID
Data Structure and algorithms	

3- Course General Objectives:

Introduction to computer graphics algorithms, programming methods and applications. Focus on fundamentals of two- and three-dimensional raster graphics: scan-conversion, clipping, geometric transformations, and camera modeling. Advanced concepts in computational geometry, computer-human interfaces, animation, and an introduction to visual realism .

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4- Intended Learning Outcomes (ILO):

Code	Intended Learning Outcomes
ILO1	Understand the fundamentals of :
ILO2	Input and Output devices,
ILO3	2D transformation, clipping and windowing algorithms,...
ILO4	3D transformation, projection algorithms,...
ILO5	Algorithms for visible surface elimination, ...
ILO6	Geometric Modelling, different representations, visualization,...
ILO7	Color models and local and global illumination,...
ILO8	Principles of animation, physical simulation,...

5- Course Syllabus (18 hours of total synchronized sessions; 18 hours of total Recorded Sessions)

- **RS:** Recorded Sessions; **SS:** Synchronized Sessions;

ILO	Course Syllabus	RS	SS	Type	Additional Notes
ILO1				<input type="checkbox"/> Exercises <input type="checkbox"/> Assignments <input type="checkbox"/> Seminars <input type="checkbox"/> Projects <input type="checkbox"/> Practices <input type="checkbox"/> Others	
ILO2				<input type="checkbox"/> Exercises <input type="checkbox"/> Assignments <input type="checkbox"/> Seminars <input type="checkbox"/> Projects	

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				<input type="checkbox"/> Practices <input type="checkbox"/> Others	
ILO3				<input type="checkbox"/> Exercises <input type="checkbox"/> Assignments <input type="checkbox"/> Seminars <input type="checkbox"/> Projects <input type="checkbox"/> Practices <input type="checkbox"/> Others	
ILO4				<input type="checkbox"/> Exercises <input type="checkbox"/> Assignments <input type="checkbox"/> Seminars <input type="checkbox"/> Projects <input type="checkbox"/> Practices <input type="checkbox"/> Others	
ILO5				<input type="checkbox"/> Exercises <input type="checkbox"/> Assignments <input type="checkbox"/> Seminars <input type="checkbox"/> Projects <input type="checkbox"/> Practices <input type="checkbox"/> Others	
ILO6				<input type="checkbox"/> Exercises <input type="checkbox"/> Assignments <input type="checkbox"/> Seminars <input type="checkbox"/> Projects <input type="checkbox"/> Practices <input type="checkbox"/> Others	
ILO7				<input type="checkbox"/> Exercises <input type="checkbox"/> Assignments <input type="checkbox"/> Seminars <input type="checkbox"/> Projects <input type="checkbox"/> Practices <input type="checkbox"/> Others	
ILO8				<input type="checkbox"/> Exercises <input type="checkbox"/> Assignments <input type="checkbox"/> Seminars <input type="checkbox"/> Projects <input type="checkbox"/> Practices <input type="checkbox"/> Others	

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6- Assessment Criteria (Related to ILOs)

ISC	Interactive Synchronized Collaboration	Ex	Exams	Rpt	Reports
PF2F	Presentations and Face-to-Face Assessments	PW	Practice Work		

ILO Code	ILO	Intended Results	Assessment Type				
			ISC	PW	Ex	PF2F	Rpt
ILO1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
ILO2			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
ILO3			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
ILO4			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
ILO5			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
ILO6			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
ILO7			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
ILO8			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

7-Practice Tools:

Tool Name	Description
Course Name	

8-Main References

Textbook: Computer Graphics (Third Edition): D. Hearn et M. Baker. Prentice-Hall, 2004.

9-Additional References

References:

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Computer Graphics: Principles and Practice (2nd Ed.), J. D. Foley, A. van Dam, S. K. Feiner, J. F. Hughes. Addison-Wesley, 1997.

Introduction to Computer Graphics, J. D. Foley, A. van Dam, S. K. Feiner, J. F. Hughes. Addison-Wesley, 1990.

Interactive Computer Graphics: A Top-Down Approach Using Open GL (Third Edition), Edward Angel, Pearson Education, 1997.

OpenGL Reference Manual: The official reference document OpenGL architecture (Addison Wesley)