University: **Alexandria**
Faculty: **Science**
Program: **Computer Science**

Form no. (12)
Course Specification

1- Course Data

Course Code:	Course Title:	Academic Year/Level:
CS 401	**Computer Graphics**	Second level (Second semester)
Specialization: Computer Science	No. of Instructional Units: **Lecture** 2 **Lab** 3	

2- Course Aim	• This course is designed to encourage in students a sense of interest for Computer graphics concept and its application in different contexts • Provide a solid foundation in the major areas of Computer graphics • Provide education and training of high quality in Computer graphics

3- Intended Learning Outcome

a- Knowledge and Understanding	a1. Describe the main concepts, definitions of graphic systems a2. Review theories and concepts used in Computer graphics a3. Identify an understanding of the contribution and impacts of Computer graphics in scientific, social, economic, environmental, political and cultural terms. a4. Transformation and animations a5. Clipping and viewing a6. Drawing and filling objects

b- Intellectual Skills	b1. Manipulate and apply appropriate theories, principles and concepts relevant to Computer graphics b2. Critically assess and evaluate the literature within the field of Computer graphics b3 Deduce and interpret information from a variety of sources relevant Computer graphics
c- Professional Skills	**c1.** Plan, design and execute practical activities using techniques and procedures Appropriate to Computer graphics **c2.** Execute a piece of independent research using Computer graphics, computer media and techniques;.
d- General Skills	**d1.** Develop appropriate effective written and oral communication skills relevant to the specific course of Computer graphics **d2.** Demonstrate the ability to work effectively as part of a group **d3.** Solve problems relevant to Computer graphics using ideas and techniques some of which are at the forefront of the discipline. **d4.** Solve problems relevant to **applications in real life** in computer science using old and new languages some of which are at the forefront of the discipline;
4- Course Content	- What is the computer graphics - Rasterization method - Line and circle - Filling and clipping - transformation - Color system & graphic hardware - Graphic animation

5- Teaching and Learning Methods	Lecturers – Home works - Oral discussion **-** Quizzes
6- Teaching and Learning Methods for Students with Special Needs	NONE
7- Student Assessment:	
a- Procedures used:	Lecturers – tutorials- homework – oral discussion **-** Quizzes
b- Schedule:	Mid-Term exam… …. Week 10 Final exam …………….. Week 17
c- Weighing of Assessment:	Term work (exam + home works) 20% Lab exam 10% Oral exam 10% Final exam 60%
8- List of References:	Computer graphics: A modern approach
a- Course Notes	Course notes provided by the Faculty member of Computer Science Division, Math department, to be handled at the beginning of the semester.

b- **Required Books (Textbooks)**	Computer graphics: A modern approach
c- **Recommended Books**	Computer graphics: A modern approach
d- **Periodicals, Web Sites, ..., etc.**	

Course Instructor: Dr. Yasser Fouad
Head of Department: Prof. Dr. Mahmoud El-Alem.
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