

Ministry of Higher Education and Scientific Research

Supervision and Scientific Evaluation Body

Quality Assurance and Academic Accreditation Office

## Course Description Sample

**Subject:** Engineering Drawing

This course description provides a brief survey of the most important characteristics, expected learning output, showing whether students have made full use of the learning opportunities. These characteristics have to be matched with the description of the program.

1. Educational Institution	Shatt Al-Arab University College
2. Department / Center	Computer Technology Engineering
3. Course Title /Code	Computer Applications
4. Lecturer Name	Hussein Fouad abbas almazini
5. Type of Teaching	Attendance
6. Academic Year /Term	Midterm
7. Total No. of Teaching Hours	90 hours / every week 3 hours
8. Date of Preparing this Course Description	11/7/2022

### 9. Course Objectives

Learn about the engineering programming language (Mat Lab) and how to use it in solving linear, non-linear and differential problems and equations

Introducing the student to the various capabilities of (Mat Lab), as well as dealing with matrices and mathematical functions, and on two- and three-dimensional graphics

## 10. Course Output, Methodology and Evaluation

### (A) Cognitive Objectives

A- Cognitive goals
A 1- Learn about linear, non-linear and differential engineering programming language and how to use it in solving problems and equations (Mat Lab)
A 2- Introducing the student to the possibility of dealing with matrices and various mathematical functions, as well as dealing with numbers
A- Cognitive goals

### (B) Skill Objectives Related to the Program:

B - Skills objectives of the course.
B1 - Using mathematical functions and applying them through the program
B2 - Solve math equations and matrices through programming

### Methods of Teaching and Learning

Academic lectures that contribute to laying a solid foundation to support the student's cognitive hunting
A practical laboratory that provides practical experience to the student through practical experiences, which in turn supports and enhances
Understand and understand the theoretical side

### Methods of Evaluation

Interactive assessment that takes place directly between the student and the professor, and it is one of the methods of feedback that is adopted
The faculty members should evaluate the teaching and learning process
Periodic written tests that provide information on the extent to which the student follows the scientific content and the extent of his interaction with
The material given by the instructor
The quarterly exams and the middle episode in which the student's interest and follow-up of the scientific material was assessed on both sides
Theoretical and skillful during the whole semester
Final exams, which are the final episode in evaluating the student and the extent of his interaction and interest in the scientific material during a year
full course

### (C) Sentimental and Value Objectives

C- Emotional and value goals
C 1- Cultivating a spirit of creativity among students and making sure that they find innovative solutions to various problems
C 2- To develop students' ability to work collectively as effective teams that produce outstanding results
C 3 - Develop a sense of responsibility among students and psychological preparation to bear the burdens placed on their shoulders

### D) General and Qualitative Skills (other skills related to the ability of employment and personal development)

Transferred general and qualification skills (other skills related to employability and personal development).
D 1- Calculating the input and output values of electronic circuits that contain a diode or a transistor
B2 - How to design electrical circuits according to certain values

## 11. Course Structure

Week	No of Hours	Required Learning Output	Title of Subject	Teaching Method	Evaluation
1	3 working hours per week	Introduction ,Matlab environment ,Mat lab windows	Introduction Mat lab	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
2+3		A first program, Expression, Constants	A first program	Practical lectures	Assessment varies according to assessment

					methods; achievement test + class assignment
4		Variables and assignment statement	Variables	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
5		Arrays, Built in functions, basic matrix		Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
6+7		Multiple data sets in one graph	Basic Plotting	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
8+9+10		Conditional statement	Control statement	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment

11+12+13		While, for statement	repetition	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
14		String handling	String handling	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
15		Procedures and function	function	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
16		cells	cells	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
17		Length, size, reshape, dot	Printing output	Practical lectures	Assessment varies according to assessment methods;

					achievement test + class assignment
18+19+20		Handle graphics GUI and user interface	GUI	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
21		Getting input, setting output	GUI interface	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
22+23		Predefined GUI	GUI	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
24+25		Menu-driven programs	Menu-driven programs	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment
26+27		Writing and reading to & from	Manipulating text	Practical lectures	Assessment varies

		text file			according to assessment methods; achievement test + class assignment
28+29+30		Introduction to image analysis	Image	Practical lectures	Assessment varies according to assessment methods; achievement test + class assignment

## 12. Infrastructure

a. Textbooks	<p>David McMahon, "Matlab Demystified", 2007.</p> <p>Brain Hahn and Daniel T. Valentine, "Essential Matlab for enginners and scientists", 3<sup>rd</sup> edition, 2007.</p> <p>Stephen J. Chapman, "essential matlab of programming", 2<sup>nd</sup> edition, 2008.</p>
b. References	
c. Recommended books and periodicals (journals, reports, etc.)	
d. Electronic references, internet websites, etc	

## 13. The Plan of Improving the Course

Adding vocabulary to the curricula within the development of the course, at a rate not exceeding 5%