

Ministry of Higher Education and Scientific Research

Supervision and Scientific Evaluation Body

Quality Assurance and Academic Accreditation Office

## Course Description Sample

**Subject: Electronic devices and circuits.**

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	<b>Electronic devices and circuits</b>
4. Lecturer Name	Ghufran Mohammed Jassim
5. Type of Teaching	Attendance
6. Academic Year /Term	2022-2023
7. Total No. of Teaching Hours	60 hours
8. Date of Preparing this Course Description	29/9/2022

### 9. Course Objectives

- a. Providing students with the most important principles and basics of electronic device and circuit
- b. Teaching students how to apply electronic device and circuit
- c. Providing graduates with the necessary knowledge on electronic device and circuits in organizations.
- d. Improving the administrative skills in the field of electronic device and circuits

e. Providing graduates with the skills of education and creative learning.

## 10. Course Output, Methodology and Evaluation

### (A) Cognitive Objectives

a. Enabling students to acquire knowledge and the art of electronic device and circuits

b. Acquainting students with how to promote their personal knowledge.

c. Helping students to acquire knowledge in the art of electronic device and circuits

d. Enabling students to sharpen their skills in the dynamic work environment.

e. Enabling students to invest their scientific abilities in their working place in the scope of electronic device and circuits

f. Helping students to get the necessary knowledge to solve problems electronic device and circuits

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

a. Scientific Skills

b. Leadership Skills

c. Skills Related to Administrative Work Challenges

### Methods of Teaching and Learning

a. Using already- prepared lectures.

b. Using up-to-date data shows.

c. Homework

d. Adopting group discussions.

### Methods of Evaluation

a. Oral tests

b. Monthly tests
c. Daily quizzes
d. Students' Regular Attendance

**(C) Sentimental and Value Objectives**

a. Realizing ethical objectives.
b. Commitment to university traditions.
c. Compliance with the University Instructions and the Ministry Regulations.
d. Promoting students' personal abilities in educational scopes and how to behave well with others.

**Methods of Teaching and Learning**

a. Lectures on university instructions.
b. Educational guidance lectures.
c. Continuous directing.
d. Visiting State and private institutions.
e. Showing practical cases.

**Methods of Evaluation**

a. Daily quizzes.
b. Classroom discussions and commitment to ethics and sublime values.
c. Special marks for class activities.
d. Monthly and quarterly evaluation.

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

a. Enabling students to acquire the skill and art of electronic device and circuits
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b. Enabling students to apply creative thinking in electronic device and circuits
c. Enabling students to use modern methods of analysis and conclusions.
d. Enabling students to electronic device and circuits

## 11. Course Structure

Week	No of Hours	Required Learning Output	Title of Subject	Teaching Method	Evaluation
1	2	understanding the material	Physic of semiconductor	- lectures - case study -discussions	- oral tests -questions
2	2	understanding the material	Physic of semiconductor diode	- lectures - case study -discussions	- oral tests -questions
3	2	understanding the material	Physic of Transistor	- lectures - case study -discussions	- oral tests -questions
4	2	understanding the material	Diode equivalent circuits DC analysis	- lectures - case study -discussions	- lectures - case study -discussions
5-6	4	understanding the material	Ac to DC Half and Full Wave Rectifier	- lectures - case study -discussions	- lectures - case study -discussions
7	2	understanding the material	Clipper circuit	- lectures - case study -discussions	- lectures - case study -discussions
8	2	understanding the material	Clamper circuit	- lectures - case study -discussions	- lectures - case study -discussions
9	2	understanding the material	BJT transistor DC equivalent circuits	- lectures - case study -discussions	- lectures - case study -discussions
10	2	understanding the material	Common Base (C.B) and Common Collector (C.C)	- lectures - case study -discussions	- lectures - case study -discussions

11	2	understanding the material	Common Emitter (C.E) and DC analysis	- lectures - case study -discussions	- lectures - case study -discussions
12	2	understanding the material	Load line and Q-point	- lectures - case study -discussions	- lectures - case study -discussions
13	2	understanding the material	BJT transistor AC equivalent circuits h-parameters	- lectures - case study -discussions	- lectures - case study -discussions
14	2	understanding the material	BJT transistor AC equivalent circuits re-parameters	- lectures - case study -discussions	- lectures - case study -discussions
15	2	understanding the material	Transistor Amplifier	- lectures - case study -discussions	- lectures - case study -discussions
16	2	understanding the material	Transistor Amplifier	- lectures - case study -discussions	- lectures - case study -discussions
17	2	understanding the material	FET transistor DC equivalent circuits	- lectures - case study -discussions	- lectures - case study -discussions
18	2	understanding the material	Common Gate (C.G) and Common Source (C.S)	- lectures - case study -discussions	- lectures - case study -discussions
19	2	understanding the material	Common Drain (C.D) and DC analysis	- lectures - case study -discussions	- lectures - case study -discussions
20	2	understanding the material	Load line and Q-point	- lectures - case study -discussions	- lectures - case study -discussions
21-22	4	understanding the material	Power Amplifiers	- lectures - case study -discussions	- lectures - case study -discussions
23	2	understanding the material	Operational Amplifier circuits	- lectures - case study -discussions	- lectures - case study -discussions

24	2	understanding the material	Inverter and non-inverter	- lectures - case study -discussions	- lectures - case study -discussions
25	2	understanding the material	Summing and subsector	- lectures - case study -discussions	- lectures - case study -discussions
26	2	understanding the material	Integration and diff.	- lectures - case study -discussions	- lectures - case study -discussions
27-28	4	understanding the material	Oscillators	- lectures - case study -discussions	- lectures - case study -discussions
29-30	4	understanding the material	Integrated Circuits	- lectures - case study -discussions	- lectures - case study -discussions

## 12. Infrastructure

a. Textbooks	Boylestad Robert L and Louis Nashelsky. 1978. Electronic Devices and Circuit Theory. 2d ed. Englewood Cliffs N.J: Prentice-Hall.
b. References	
c. Recommended books and periodicals (journals, reports, etc.)	
d. Electronic references, internet websites, etc	

## 13. The Plan of Improving the Course

a. Studying labor market needs.
b. Be informed of the experiences of other countries in the field of advanced mathematics and numerical method
c. Be informed of research work published in national and international journals in the field of advanced mathematics and numerical method