Program: Mechanical Technology Engineering Diploma in Power Mechanics Techniques Engineering Department

1- About the program

Program Aim:
Postgraduate studies are one of the most important productions of the scientific department and the college on the road to advancement and progress due to its serious connection in giving treatments and solutions to the problems of society towards strengthening national capabilities, reducing the technical gap with developed countries and pushing society forward, in addition to its contribution to developing the capabilities of the faculty member.
The study of a higher diploma in general mechanical engineering aims to prepare a specialized staff in the field of mechanical engineering / general and qualifies the graduate to be able to:
1. Conducting studies and research within his specialization.
2. Providing scientific advice and solving dilemmas in the field of work within his competence.
3. Attention to issues of scientific progress.
4. Deepening the scientific cohesion between the college and other colleges and research centers.
5. Graduating engineering and scientific cadres capable of dispensing knowledge, whether inside or outside the college and in various state departments.

Medium and Course Assessment
1. Conducting studies and research within the specialty
2. Providing scientific and practical advice and solving problems in the field of work
3. Modernization and design of Thermal energy, refrigeration and air conditioning systems to suit climatic and environmental conditions
4. Study of renewable energy and the use of alternative devices that consume electrical energy and fuel in industrial and service facilities

Mode and Duration of Study: -
Acceptance of graduates who hold a bachelor's degree and who are scientifically qualified according to the average and the results of the test conducted for this purpose and from the following scientific departments: -
1. Mechanical engineering is a general specialization.
2. Refrigeration and Air Conditioning Technologies Engineering.
3. Engineering of machinery and equipment.
 Admission Requirements: -
Admission to postgraduate studies for the above specializations considers the admission requirements approved by the Ministry of Higher Education and Scientific Research to obtain a Higher Diploma Degree in terms of average, specialization, English language proficiency and (IC3) certificate.

Graduation Requirements

Technical Higher Diploma Degree in Thermal Engineering Technologies in the Department of Power Mechanics Techniques Engineering Required;

Curriculum Structure

Total credits required:

35 credits for courses.

12 credits for research project.

First Semester

No	Course No.	Subject	No. Hr./Week		No. of Units
			Theoretical	Practical	
1	01	Advanced Fluid Mechanics	2	2	3
2	02	Advanced Heat Transfer	2	2	3
3	03	Advanced Numerical Analysis	2	---	2
4	04	Advanced Engineering Materials	2	---	2
5	05	Advanced Machine Design	2	2	3
6	06	Advanced Applied Mathematics	2	---	2
7	07	English Language	2	---	2
8	08	Research Methodology	1	---	1
		Total	15	6	18

Second Semester

No.	Course No.	Subject	No. Hr./Week		No. of Units
			Theoretical	Practical	
1	01	Design of Heat System	2	---	2
2	02	Cutting Processes	2	2	3
3	03	Renewable Energy	2	2	3
4	04	Metal Forming Processes	2	---	3
5	05	X-Ray and Electronic Microscopy	2	---	2
6	06	Vibration	2	---	2
7	07	English Language	2	---	2
		Total	14	4	17