

Academic Program Description Form

University Name: Diyala

Faculty/Institute: Engineering

Scientific Department: Materials engineering

Academic or Professional Program Name: Bachelor of Materials engineering

Final Certificate Name: Bachelor of Materials engineering

Academic System: course

Description Preparation Date: 24-6-2024

File Completion Date: 24-6-2024

Signature:

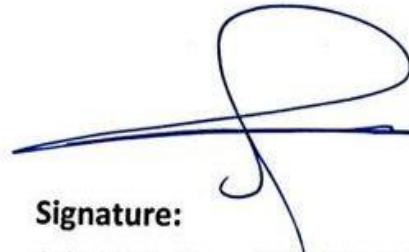


Head of Department Name:

Suha K. Shihab

Date: 25/6/2024

Signature:



Scientific Associate Name:

Jabbar Galtmeh

Date: 25/6/2024

The file is checked by:

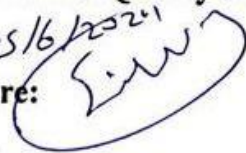
Salah N. Farhan

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 25/6/2024

Signature:



Approval of the Dean



Prof. Dr. Anees A. Khadim

Course Title: Selection of Courses

1. Program Vision

2. Program Mission

3. Program Objectives

4. Program Accreditation

5. Other external influences

6. Program				
ملاحظات *	النسبة المئوية	وحدة دراسية	عدد المقررات	هيكل البرنامج
	4.24%	6	5	متطلبات المؤسسة
	14.20%	20	9	متطلبات الكلية
				متطلبات القسم
Graduation Requirements	-	-	-	التدريب الصيفي
				أخرى

* ممكن ان تتضمن الملاحظات فيما اذا كان المقرر أساسي او اختياري .

7. Program Description				
Credit Hours		Course Name	Course Code	Year/Level
<i>practical</i>	<i>theoretical</i>			

8. Expected Learning Outcomes of the Program	
	<i>Knowledge</i>
<i>Learning Outcomes Statement 1</i>	<i>Learning Outcomes 1</i>
	<i>Skills</i>
<i>Learning Outcomes Statement 2</i>	<i>Learning Outcomes 2</i>
<i>Statement of Learning Outcomes 3 (Special Skills if applicable)</i>	<i>Learning Outcomes 3</i>
	<i>Values</i>
<i>Learning Outcomes Statement 4</i>	<i>Learning Outcomes 4</i>
<i>Learning Outcomes Statement 5</i>	<i>Learning Outcomes 5</i>

9. Teaching and learning strategies

10. Evaluation methods

11. Faculty					
Faculty Members					
Preparation of the teaching staff		Special requirements/skills if any	Specialization		Academic Rank
lecturer	angel		special	year	

Professional Development

Orientation of new faculty members

Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level
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Professional development for faculty members

Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.
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12. Acceptance Criterion

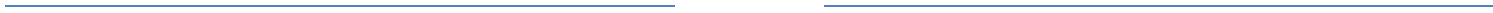
13. The most important sources of information about the program

14. Program Development Plan

مخطط مهارات البرنامج

مخطط مهارات البرنامج												اساسي أم اختياري	Course Name	Course Code	Year/Level
Learning outcomes required from the program				المهارات				المعرفة							
4C	3C	2c	1C	4b	3b	2b	1b	A4	A3	A2	A1				
√	√	√	√	√	√	√	√	√	√	√	√	Essential	Materials Selection for Design I	MAE401	Fourth / First Semester

- Please tick the boxes corresponding to the individual learning outcomes from the program subject to evaluation



Course Description Form

1. Course Title :					
Heat Treatment					
2. Course Code:					
MAE heat treatment					
3. Semester / Year:					
Second/Third					
4. Date of preparation of the description:					
8/8/2024					
5. Available attendance formats:					
My presence (mandatory)					
6. Number of Hours (Total) / Number of Units (Total):					
30 hours / 2 units					
7. Name of the course administrator (if more than one name is mentioned):					
Name: Assoc. Prof. Ali Adwan Hammoud Email: dr.ali_edwin@uodiyala.edu.iq					
8. Course Objectives					
<p>A- Knowledge Objectives</p> <p>A1- During the academic year, the student learns an idea of what heat transactions are and the main principles of thermal transactions .</p> <p>A2- Learn and understand the classifications of heat coefficients, the difference between them and the advantages of each classification.</p> <p>A3- Learn and understand the methods of heat treatments and the advantages of each method from the other.</p> <p>A4- Learn and understand the properties of heat coefficients and test properties for these methods.</p> <p>A5- Identify the scientific and engineering applications of thermal treatments</p>			Course Objectives		
9. Teaching and Learning Strategies					
<ul style="list-style-type: none"> ✓ The teacher prepares lectures on the subject in electronic form and presents them to students. ✓ The teacher gives lectures in detail. ✓ The teacher requests periodic reports and homework on the basic topics of the subject 					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily exams + monthly exams	Lectures PDF Power Point Video	An Introduction to Heat treatment of metals	The teacher explains an introduction to the heat treatments of metals in general and their importance	2	First
Daily exams + monthly exams	Lectures PDF Power Point Video	Principles of Heat treatment of steel	Identify the principles of heat treatments of steel	6	II-IV
Daily exams + monthly exams	Lectures PDF Power Point	Methods of heat treatment of steels	Identify the processes of heat treatment of steel	6	V-VII

	Video				
Oral assessment	Lectures displayed in PowerPoint format	Seminar	Discussion of Sumner for each student or group of students	2	Eighth
Daily exams + monthly exams	Lectures PDF Power Point Video	Hardenability of steels	Identify the hardenability of steel	2	Ninth
Daily exams + monthly exams	Lectures PDF Power Point Video	Quenching method used of heat treatment of steel	Learn about the tempering technology of steel	6	Tenth-Twelfth
Daily exams + monthly exams	Lectures PDF Power Point Video	Types of quenching methods of steel	Recognize the surface hardening coefficients of steel	4	Thirteenth – Fifteenth

11. Course Evaluation	
Distribution of the grade out of 100 according to the tasks assigned to the student such as daily preparation and daily, oral and monthly exams editorial and reports etc	
12. Learning and Teaching Resources	
There are no textbooks for the subject	Required textbooks (methodology, if any)
College library for additional curriculum resources. Access to scientific websites to see the latest developments in the article .	Main references (sources)
1-Steel heat treatment :	Recommended supporting books and references

<p>Metallurgy and Technologies George E. Totten CRC Press , Taylor & Francis Group 2- Heat Treatment : Principles and Techniques T.V.Rajan, C.P.Sharma and Ashok Sharma PHI Learning Private Limited 3- Heat Treatment of Materials Vijendra Singh Standard Publishers Distributors, Delhi</p>	<p>(journals, reports..)</p>
<p>1- Phase Transformations & Heat Treatment Prof. M.P.Gururajan NPTEL web course 2- Practical Heat Treating Howard E. Boyer American society for metals 3- Introduction to Physical Metallurgy Sidney H. Avner McGraw Hill Education (India) Pvt Ltd</p>	<p>Electronic References, Websites</p>