Ministry of Higher Education and Scientific Research Supervision and Scientific Assessment Office Department of Quality Assurance and Academic Accreditation

A Descriptive form Of Academic Program for Colleges and Institutes

University: Northern Technical College/institute: Technical in Mosul Scientific Department: Mechanical Techniques Folder creation Date: Sept. 11, 2023

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Dr. Raghad Ghalib Sultan

Date: Sept. 11, 2023

The folder has checked by

Quality Assurance and University Performance Dept.

The Head of Quality Assurance and University Performance Dept.:

Date: / /

Signature:

Dean Ratification

Assistant Prof. Shahla Abdul Wahab Abdul Kader

Ministry of Higher Education and Scientific Research Supervision and Scientific Assessment Office Department of Quality Assurance and Academic Accreditation

ACADEMIC PROGRAM DESCRIPTION Mechanical Department 2023/2022

The academic program provides a summary of the program important characteristics and the learning output that expected to be achieved by the student, proving that he may be attained the high benefit from provided opportunities. And each lecture within the program is accompanied with a description. 1. Educational Institution: Northern Technical University

- 2. Scientific Dept./centre: technical Institute/ Mosul
- 3. Academic or occupational program name: Mechanical Techniques
- 4. Certificate name: Diploma in Mechanical Technique
- **5. Educational system:** courses in both 1st and 2nd stages
- 6. The accredited accreditation program: Units system
- 7. Other outside effects: * novel scientific researches- scientific visits
 - * Holding sessions to discuss what may be discovered globally in the field of mechanics

8. Date of preparing the description: 10 Sept., 2023

9. Aims of the Academic program: the program aims to graduate technical cadres

that scientifically and practically specialized and qualified suitable to the technical developing needs and improving the manufacturing Branch within

the

Department.

10. Required program outcomes and methods of teaching, learning and assessment:

a. cognitive goals:

- 1. Identifying the means of collecting data according to public interest.
- 2. Identifying the devices and laboratories.
- 3. Identifying the ways to deal with these devices especially metal testing devices.
- 4. Following the industrial safety instructions in the laboratories.

b. Skill objectives of the program:

- 1. Training students on all laboratories and on the dangers in them.
- 2. Training students on the ways of connecting the devices and doing experiments.
- 3. Training students on how they use these devices carefully and safety.

Teaching and learning approaches:

Theoretical lectures, self-learning, travels, argumentation sessions, novel scientific, practical training in laboratories, and summer training.

Assessment approaches:

Daily assessment, oral tests, pre-tests, weekly reports, monthly exam including first and second semester (theoretically and practically).

c. Cognitive and value objectives:

1. Learning and training on group participation and voluntary work.

2. Detecting errors and the ways to solve them.

Approaches of teaching and learning:

- a. Daily exams using homework questions to solve independently.
- b. Oral exams during the lecture.
- c. Competitional tests between groups of students within one class.
- d. Tests to encourage scientific competition between classes and stages.

Assessment Approaches:

Commitment to duties such as (preparing scientific reports in the field of specialization and discussing them).

Using the degrees for assessing the written and oral exams and weekly and annual reports.

11. The structure of the program:

Northern Technical UniversityMosul Technical InstituteEducational plan /2023-2022Department: Mechanical Techniques/production								
	Educa	ational level (first stage)						
Requirement type	Туре	of Lecture	Number of	Number of	Number	Prelimina ry topic if	symbol	
nequitement type	English	Arabic	theoretical hours	practical hours	of units	any		
	Human rights and Democracy	حقوق الانسان والديموقراطية (اجباري)	2		2		NTU100	
	English language 1	لغة انكليزية (اجباري)	2		2		NTU101	
University requirements (12 units) (4 obligatory + 1 optional)	Computer principles 1	مبادىء الحاسوب/1 (اجباري)	1	2	3		NTU102	
	Computer principles 2	مبادىء الحاسوب/ (اجباري)2	1	2	3	NTU102	NTU103	
	Arabic Language	اللغة العربية (اختياري)	2		2		NTU104	
	Sport	رياضة (اختياري)	1	1	2		NTU105	
	Mathematics1	رياضيات 1 (اجباري)	2		2		TIMO110	
Institute requirements (13 units) (4 abligatory lecture)	Mathematics 2	رياضيات 2 (اجباري)	2		2	TIMO110	TIMO111	
institute requirements (15 units) (4 obligatory lecture)	Engineering Drawing1	رسم هندسي 1 (اجباري)		3	3		TIMO112	
	Workshop 1	ورشة 1 (اجباري)		6	6		TIMO113	
	Mechanics 1	ميكانيك 1 (اجباري)	2	2	4		METP 120	
	Mechanics 2	ميكانيك 2 (اجباري)	2	2	4	METP120	METP121	
	Manufacturing Process 1	عمليات تصنيع 1 (اجباري)	2	2	4		METP122	
	Manufacturing Process 2	عمليات تصنيع 2 (اجباري)	2	2	4	METP122	METP123	
The specialization requirements (32 units) (8 obligatory lecture +	Material Properties1	خواص مواد 1 (اجباري)	2		2		METP124	
1 ontional Lecture)	Materials Properties2	اخواص مواد 2 (اجباري)	2		2	METP124	METP125	
i optional Dectare)	Engineering Drawing 2	الرسم الهندسي 2 (اجباري)		3	3	TIMO112	METP126	
	Workshops 2	المعامل 2 (اجباري)		6	6	TIMO113	METP127	
	Electrical Technology	تكنولوجيا الكهرباء (اختياري)	1	2	3		METP128	
	Strength of materials 1	مقاومة مواد 1 (اختياري)	1	2	3		METP129	
	التدريب الصيفي (اجباري)					METP131		
Summation of total theor	35	27						
Summation			62					

Northern Technical University	Educa Mosul Technical Institute	tional plan /2023-2022 Department: Mechanical Tecl	nniques/production				
	Educati	onal level (second stage)					
1		(B)					
Requirement type	Type of Lectu	ire	Number of	Number of	Number of units	Preliminary topic if any	symbol
	English			practical notifs		topic, if any	NTU201
University requirements (4 units) obligatory	English Language 2	نعه الحليرية 2 (الجباري)	2		2		N10201
	Professional Ethics	اخلاقيات المهنة (اجباري)	2		2		NTU202
	Project	مشروع (اجباري)		4	4		TIMO206
1 optional lecture)	Principles of occupational safety	مبادىء السلامة المهنية (اختياري)	2		2		TIMO207
- • F	Industrial Management	الإدارة الصناعية (اختياري)	2		2		TIMO208
	Design of Machines 1	تصميم المكانن 1 (اجباري)	2		2		METP 21
	Design of Machines 2	تصميم المكانن 2 (اجباري)	2		2	METP 210	METP21
Γ	Manufacturing Process 1	عمليات تصنيع 3 (اجباري)	2	2	4		METP212
Γ	Manufacturing Process 2	عمليات تصنيع 4 (اجباري)	2	2	4	METP212	METP21
Γ	Workshops 3	المعامل 3 (اجباري)		6	6		METP21
	Workshops 4	المعامل 4 (اجباري)		6	6	METP214	METP21
The specialisation requirements (44 units) (11	Metallurgy1	المعادن 1 (اجباري)	2	2	4		METP21
obligatory lecture + 1 optional Lecture)	Metallurgy2	المعادن 2 (اجباري)	2	2	4	METP216	METP21
Γ	Industrial Drawing 1	الرسم الصناعي 1 (اجباري)		3	3		METP21
Γ	Industrial Drawing 2	الرسم الصناعي 2 (اجباري)		3	3	METP218	METP21
	Computer Applications 1	تطبيقات الحاسوب 1 (اجباري)	1	2	3		METP22
Γ	Computer Application 2	تطبيقات الجاسوب 2 (اجباري)	1	2	3		METP22
Γ	Strength of Material 2	مقاومة مواد 2 (اختياري)	2		2	METP219	METP22
Γ	Welding and Metal forming	اللحام وتشكيل المعادن (اختياري)	2	2	4		METP224
Γ	Quality Control	السيطرة النوعية (اختياري)	2		2		METP22
Summation of tot	28	36					
Sum	nation of Total units			64		1	

12. Personal development planning:

- 1. Participation in scientific conferences that related to Mechanical specialisation.
- 2. Delegating workers for training inside and outside the country.
- 3. Conducting field researches specialised in Mechanical field.
- 4. Scientific pairing with other universities and corresponding colleges.
- 5. Employing a new and suitable educational means that serve what the student has acquired of information need in his general occupational life.
- 6. Employment skills required for learning process and required techniques that needed for acquiring information.

13. Admission criteria (Establishing regulations related to enrollment in the college or institute):

- 1. Central Admission the ministry has prepared according to specific conditions.
- 2. High school average of the student.
- 3. The capacity of the department.
- 4. The most Important information resources about the program.

14. The most Important information resources about the program:

1. Scientific and methodological teaching courses.

- 2. Scientific external resources (Books, papers, and Internet).
- 3. Teaching Staff.
- 4. Skills of laboratory practice and researching skills.

	Course skill Diagram																		
	Please tick the boxes corresponding to the individual learning outcomes from the program being assessed																		
		Learning outcomes required from the programme																	
tra (oth to d	Gener quali nsfera ner ski empla and pe leveloj	al and ifying able sl ills rel oyabil ersona pment	l kills ated lity ıl t)	Cog	nitive obje	and v ctive	alue	Ski th	lls obj e prog	ective gramr	s of ne	Cognitive objectives		Lognitive objectives		Obligatory or optional	Course name	Course symbol	Grade/Year
d4	d3	d2	d1	<i>c4</i>	сЗ	<i>c2</i>	c1	b4	b3	b2	b1	a4	аЗ	a2	a1				
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Department Lecturers		Production	First

Course description model

Course description

It provides a short summary for most important characteristics of the course and learning outcomes that expected from the student to achieve, to prove if he has achieved the best benefit from available learning chance, and there must be a connection between it and the program description.

1.	Educational Institute	Northern Technical Institute
2.	Scientific department/ centre	Mechanical Techniques Department/ Mosul
	-	Technical Institute
3.	Name/ course symbol	Production
4.	Available attendance forms	1. Weekly lessons schedule
		(theoretically and practically)
		2. Discussions, scientific sessions, other
		extracurricular activity, and scientific
		conferences.
5.	Semester/ year	Semester
6.	Number of study hours (total)	51 theoretically
		85 practically
7.	Date of preparing the	10 th September 2023
	description	

8. Course objectives:

1- Graduating technical personnel qualified to carry out operation, maintenance and control of various production machines (lathing, milling, grinding, and scratching machines).

2- Conducting laboratory tests on raw materials and finished products, conforming to their standard specifications, and linking theoretical information to the process.

3- Informing the student about the techniques used

4- Understanding and using scientific materials

5- Familiarity with engineering drawings and maps.

9. Course outcomes and teaching, learning, and assessing approaches

A. Cognitive goals

1. Introducing the student to methods of operating and controlling various mechanical industrial devices and units and carrying out manufacturing and production operations.

2. The student compares laboratory tests of raw and resulting materials

3. How to deal with these devices, especially metal devices and various operating machines

4. Linking theoretical and practical information to benefit from improving the industrial reality.

B. Skill objectives of the course

1. The student acquires the skill of using various operating machines.

2. Use quality mechanical workshop and metallurgy laboratory tools and ensure the safety and accuracy of the results.

3. Training the student on how to care for laboratory equipment and how to deal with it.

4. The student will acquire skills in dealing with the AutoCAD program for engineering and industrial drawing.

5. The student will acquire the skill of dealing with various computer programs.

Teaching and learning approaches

Using theoretical and practical lecture system, computers, Data-show, writing reports, educational meetings, summer training, and training in Laboratories.

Assessing approaches

Daily written and oral tests, yearly and semester exams, attendance, commitment, examine students in previous objects.

- c. Cognitive and value goals
- 1. Education and training on collective participation and voluntary work.
- 2. How to discover errors and how to address them.
- 3. Learn to communicate and interact during lectures.

Teaching and learning approaches

Practical and theoretical lectures, visual observations and listening to scientific rules in courses from professors and the Internet, self-education, deductive thinking questions, summer training.

Assessment approaches

Written and oral tests, yearly and semester exams, daily exams, preparing reports in a specialized field and discussing them, and attendance and commitment.

d. General and qualifying transferable skills (other skills related to employability and personal development).

11. Cou	rse structu	ire			
Week	Hours	Required learning	Unit name/ or the	Learning	Assessment
		outcome	subject	method	method
1-2	6	Introduction to the fundamentals of Mechanics	The basic of Mechanics	Lecture, argument	Practical test
3-4	6	Training on how to use the devices	The basic of Mechanics	Showing posters	Practical test
5-6	6	Methods of testing devices.	The basic of Mechanics	Movies	Practical test
7-8	6	How to care for	The basic of	Movies	Practical test

1. Field visits to gain experience.

2. Access to scientific developments in the field of specialization.

3. Practical training in state departments.

4. Focus on those who have great mental ability and understanding.

5. Encouraging a policy of discussions so that the student has the scientific creative ability.

6. Developing students' mental and scientific abilities.

		devices	Mechanics		
9-10	6	Logical controller devices	The basic of Mechanics	Movies	Practical test
11-12	6	Taking advantages from practical reality	The basic of Mechanics	Movies	Practical test
1-2	6	Introduction to the fundamentals of Mechanics	The basic of Mechanics	Movies	Practical test

12.1	Infrastructure	
1.	Required Course books	The basic of Mechanics
	References	Scientific book available in free
		education section
	a. Books and	Any scientific process interested
	references that	in Mechanics and novel scientific
	provided by the	researches that recently issued.
2.	lecturer (scientific	
	magazines, reports,	
	etc.)	
	b. Electronic	
	references and	
	internet sites	

13. Development plan of Educational Course