Ministry of Higher Education & Scientific Research

Supervision and Scientific Evaluation Directorate

Quality Assurance and Academic Accreditation

International Accreditation Dept.

Guide to Course Descriptions and Academic Programs for 2024

Academic Program Specification Form for The Academic Year 2024

University: Northern Technical University

Faculty/Institute: Al-dour Technical Institute

Department: Department of Prosthesis

Name of the academic or professional program: Technical Diploma in Prosthetics and Orthotics

Name of the final certificate: Technical Diploma in Prosthetics and Orthotics

Academic system: Curriculum system

File preparation date: **7-9-2024**

File filling date:9-9-2024

Signature 
The name of the head of the department
Lec. Dr .Saba Damen shaker

Signature
Dean's Assistant For Scientific Affair
Prof. Dr. Hanan Shahb Ahmad

Check the file by
Quality Assurance and University Performance Division
Name of the director of the Quality Assurance and University Performance Division:

Signature 
Lec. Hayder Ali Mohssn


Dean's endorsement
Assist. Prof. Dr. Maha Elttayef Jasim

1. Program Vision

The Department of Prosthetics seeks to meet the needs of patients from prosthetics and supports using high-quality materials and is an effective way to meet the community's need for specialized cadres in supporting various health, research and educational institutions.

2. Program Mission

The Department of Prosthetics was established according to the community's need for specialized service cadres with scientific specifications and modern technical standards and preparing those cadres to work in various health and research institutions as well as supporting the private sector.

3. Program Objectives

l- The department aims to graduate technical staff capable of working in the field of artificial limbs, conducting routine examinations, general chemical tests, examining people with needs and working in private workshops.

2- Manufacturing prosthetic limbs and prosthetic supports to meet the needs of the individual so that they can perform daily activities better.

3- Providing psychosocial support to patients w{h limb loss

4. Program Accreditation

The program have not accreditation

5. Other external influences

Nothing

6. **Program Structure**				
Program Structure	**Number of Courses**	**Study unit**	**Percentage**	**Reviews***
Institution Requirements	**9**	**18**	**20.22%**	Basic course
College Requirements	**5**	**14**	**15.73%**	
Department Requirements	**16**	**57**	**64.04%**	
Summer Training	**Yes**			
Other	**Nothing**			

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
First level – First semester	NTU IOO	Democracy and human rights	2	-
	NTU lOI	English Language	2	-
	NTU IO2	Computer	1	1
	TIDO I06	Physiology	2	2
	TIDO IO9	Medical terminology	2	-
	IPT I IO	Manufacture prosthesis below knee joint	2	3
	IPT I 14	Anatomy of lower limb	1	2
	IPT I 12	Biomechanics of prosthetics	1	2
First level – Second semester	NTU IO3	Arabic Language	2	-
	NTU IO4	Sports	1	1
	NTU IO5	France Language	2	-
	TIDO I07	Anatomy	2	2
	TIDO IO8	Occupational safety	2	-
	IPT I 13	Locomotors diseases	2	-
	IPT 111	Manufacture prosthesis above knee joint	2	3
	IPT I 15	Microbiology	1	2
	IPT I 16	Parasitology	1	2

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
Second level – First semester	NTU 203	crimes of the Baath Party in Iraq	2	-
	TIDO 205	Biostatics	2	-
	IPT 207	upper limb orthosis manufacturing	2	6
	IPT 209	Manufacturing of upper limb prosthesis	1	2
	IPT 2IO	Locomotors diseases	2	-
	IPT 211	properties Material	2	-
	IPT 2I5	Physiotherapy methods	1	2
	IPT 216	Parasites	1	2
Second level – Second semester	NTU 2OO	English Language	2	-
	NTU 2OI	computer	1	1
	NTU 202	Arabic Language	2	-
	NTU 204	Professional ethics	2	-
	IPT 206	lower limb orthosis manufacturing	2	6
	IPT 208	Biomechanics of orthosis	1	2
	IPT 212	Anatomy of upper limbs and trunk	1	2
	IPT 2I3	Biomaterials	2	-
	IPT 214	Research project	-	2

8. Expected learning outcomes of the program	
A.Knowledge	
A-1	How to deal with patients with amputated legs
A-2	The ability to manufacture lower and upper limbs
A-3	Identify the various types of Lower limbs
B.Skills	
B-1	Ability to Interact with people specialized in the field of stem manufacturing.
B-2	Ability to put problems into perspective and find appropriate solutions.
B-3	Proficiency in special die casting and leg carving method
B-4	Efficiency in dealing with patients while fitting the leg
C.Ethics	
C-1	Promoting the spirit of cooperation between specialists and working as one team with the same specialty
C-2	The ability to develop oneself and update information in the field of specialization and in the long term
C-3	The optimal use of all possible means to keep pace with the modernity of the specialization
C-4	Integrating learning at the global and local levels to develop appropriate solutions to the problems presentence

9. Teaching and Learning Strategies
Theoretical lectures / discussion and dialogue / practical lectures / field visits / discussion circles /laboratories/office activities / solving examples / graduation project / summer training

10. Evaluation methods
Oral and written exams/observation and cumulative record

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistant Proff.	Biology	physiology			Staff	
lecturer	agriculture	Heredity			Staff	
Assistant teacher	Mechanical Engineering	Production and minerals			Staff	
Assistant teacher	Life sciences	physiology			Staff	
Assistant teacher	Life sciences	physiology			Staff	
Assistant teacher	Life sciences	parasites				Lecturer
Specialist Physician	Bones and joints	fractures				Lecturer
Specialist Physician	physiology ofbones and joints	physiology of bones and joints				Lecturer
Diploma in Prosthetics	Prosthetics	Prosthetics				Lecturer
Diploma in Prosthetics	Prosthetics	Prosthetics				Lecturer
Diploma in Prosthetics	Prosthetics	Prosthetics				Lecturer
Diploma in Prosthetics	Prosthetics	Prosthetics				Lecturer

Professional Development
Mentoring new faculty members
Directing new faculty members to follow up on the annual updates of the study plan and the necessity of updating the curricula in a manner consistent with the plan announced by the scientific department.
Professional development of faculty members
Conducting field visits to the public and private sectors and universities within the specialty to review the field development in the field of specialization. Involving students in discussions, scientific seminars and training courses

12. Acceptance Criterion
According, on the Central Admission Guide approved by the Iraqi Ministry of Higher Education and Scientific Research for morning and evening studies

13. The most important sources of information about the program
1. (Anatomy): • ***Gray's Anatomy for Students – By Richard Drake*** • ***Atlas of Human Anatomy – By Frank H. Netter*** **2. (Physiology):** • ***Guyton and Hall Textbook of Medical Physiology*** **3. General diseases and medical rehabilitation:** • ***Pathophysiology of Disease: An Introduction to Clinical Medicine*** • ***Physical Rehabilitation – by Susan B. O'Sullivan*** **4. Materials and Manufacturing:** • **Institute and laboratory manuals** • **Prosthetic manufacturers' manuals (e.g., Ottobock, Ossur)**

***Practical and laboratory training**

• Internal educational booklets based on the curriculum.

• Training videos from reliable sources such as:

o YouTube channels (Ex: "Ottobock Training", "Prosthetics and Orthotics Education")

14.Program Development Plan

The academic program is one of the accredited programs within the department's curriculum and is offered within one of the institute's specialized departments. This program aims to prepare graduates who possess the academic and skill requirements in their field, commensurate with the demands of the local labor market. Despite the good success, and as a result of the self-assessment results, a number of applications have been developed.

• Improving the quality of academic learning outcomes.

• Aligning the program with local labor requirements.

• Improving the efficiency of faculty members and updating the educational and assessment department.

• Updating the curriculum, including scientific updates.

• The availability of modern technologies such as teaching and learning.

• Developing student assessment criteria and accredited measurement accreditations.

• Practical and field-based proficiency among students.

• Improving the readiness of robotics for educational processes.

Program Skills Outline

Year/Level	Course Code	Course Name	Basic or optional	Required program Learning outcomes											
				Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
The First	IPT110	Manufacture prosthesis below knee joint	Basic	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
	IPT112	Biomechanics of prosthetics	Basic	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
	IPT113	Locomotors Diseases	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TIDO 109	Medical terminology	Basic	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
	IPT114	Anatomy of the lower extremities	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TIDO 106	Physiology	Basic	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
	NTU 101	English Language	Basic	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
	NTU 102	computer	Basic	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓

	NTU 100	Democracy and human rights	Basic	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
	NTU 104	Sports	optional	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
	TIDO 107	Anatomy	Basic	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
The Second	IPT 207	upper limb orthosis manufacturing	Basic	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
	TIDO 108	and workshops	Basic	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
	IPT 208	biomechanics of orthosis	Basic	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
	IPT111	prosthesis above	Basic	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
	IPT 209	Manufacture of Upper Limb prosthesis	Basic	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
	IPT115		optional	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
	IPT116	Parasites	optional	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
	NTU 103	Arabic Language	Basic	✓				✓	✓	✓	✓	✓	✓	✓	✓

	IPT 210	Locomotors diseases	Basic	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
	IPT 211	Properties of materials	Basic	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
	IPT 212	Anatomy of Upper Limb and trunk	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	IPT214	Research Project	Basic	✓				✓	✓	✓	✓	✓	✓	✓	✓
	NTU204	Professional Ethics	Basic	✓				✓	✓	✓	✓	✓	✓	✓	✓
	NTU201	Computer	Basic	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
	NTU202	Arabic Language	Basic	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
	NTU203	Crimes of Al-Baath Party in Iraq	Basic	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TIDO205	Biostatics	Basic	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	IPT 206	lower limb orthosis manufacturing	Basic	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
	IPT213	Biomaterials	optional	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	IPT 215	Physiotherapy methods	optional	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
	IPT 216	Parasites		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓