Republic of Iraq
Ministry of Higher Education and Scientific Research
Scientific supervision and evaluation device
Department of Quality Assurance and Academic Accreditation
Department Accreditation

Academic program and course description guide

2025

Introduction:

The academic program serves as a distinguished educational service aimed at developing the skills and competencies of students and graduates to meet the evolving demands of the job market. This program relies on a series of educational and training procedures based on carefully designed curricular elements, focusing primarily on preparing graduates to be academically and professionally qualified to meet the increasing requirements in various fields of work.

The academic program undergoes regular evaluation processes, including both internal and external assessments by specialized institutions, such as external accreditation programs. These evaluations aim to ensure the quality and efficiency of the program and its successful achievement of educational goals.

The academic program description is a fundamental document that provides an overview of the program's objectives, content, and educational outcomes. It acts as a guiding tool that helps map out the path to achieving these objectives. The description reflects the program's educational vision and strategy and is considered one of the key elements in ensuring that the program receives academic accreditation according to local and international standards.

This updated version of the academic program description reflects the changes and developments in higher education in Iraq and globally, incorporating ongoing revisions of course content in accordance with the latest academic standards. It also considers technological advancements and modern trends in education, both theoretically and practically, enhancing the program's ability to adapt to the new requirements of the job market.

The academic program description has been prepared according to accredited evaluation models (both theoretical and practical), in alignment with decisions issued by academic bodies, such as decision number 2906/3 dated 2023/5/3. These updates aim to ensure that the program aligns with global accreditation requirements, particularly in technical fields that require continuous adaptation to advancements.

In this context, we emphasize the importance of accurately writing academic program descriptions and designing curricula according to the latest educational trends. This description is a cornerstone for improving academic performance and ensuring the quality of education, serving as an effective tool to achieve academic excellence and meet the needs of the job market.

Additional Details on Program Elements:

1. **Academic Program Description: The academic program description provides a comprehensive overview of the program's vision, mission, objectives, and educational outcomes. It serves as a strategic reference for achieving academic development, outlining how the program is to be implemented to achieve its goals effectively.**

2. **Course Description: Offers a concise and precise description of each course, including its objectives and expected outcomes. The description should clearly detail how to maximize the benefits from the presented subject matter, and whether the student has acquired the necessary skills and knowledge.**

3. **Program Vision: The vision outlines the future aspirations of the academic program. The program seeks to be recognized locally and internationally, focusing on innovation, quality in education, sustainability, and the provision of educational programs that align with societal and job market needs.**

4. **Program Mission: The mission outlines the general objectives the program aims to achieve through teaching and learning. It includes the broad strategies to develop students' skills and prepare them for the job**

market in innovative and modern ways that align with technological and knowledge advancements.

5. **Program Objectives: These are specific objectives that the program seeks to accomplish within a particular timeframe. These objectives include developing students' knowledge and skills in ways that are measurable and evaluative, contributing to the enhancement of the educational process and the achievement of distinguished learning outcomes.**

6. **Curriculum Plan: The curriculum plan includes all the courses offered by the program, whether theoretical or practical. The plan is integrated with the educational strategies used and considers the number of credit hours for each course to ensure a balanced approach between theoretical content and practical application.**

7. **Learning Outcomes: Learning outcomes represent the set of skills, knowledge, and competencies that a student should acquire by successfully completing the academic program. These outcomes are defined based on the program's objectives and are a vital tool for assessing the effectiveness of education and ensuring the achievement of high-quality learning outcomes.**

8. **Teaching and Learning Strategies: These are the strategies employed by the faculty to ensure the program's educational objectives are met. These strategies include various teaching methods such as interactive learning, e-learning, and classroom and extracurricular activities that contribute to a deep understanding of the educational content and achieving the desired learning outcomes.**

Conclusion:

With the preparation of this comprehensive academic description, we hope that the program will meet the highest standards of academic quality and effectively contribute to improving educational outcomes and developing students' skills in line with the requirements of the modern job market. Through this guide, we aim to elevate the level of academic education and contribute to enhancing the university's standing both locally and internationally.

Ministry of Higher Education and Scientific Research

Scientific supervision and evaluation device

Department of Quality Assurance and Academic Accreditation

Academic program description form for colleges and institutes for the academic year 2024-2025

University: Northern Technical University

College/Institute: Hawija Technical Institute

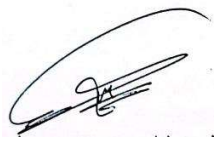
Scientific Department: Optometry Techniques Department

Signature: 

Department Head:

Dr. Faaiz Ahmed Mohammed

16/10/2024

signature: 

Scientific Assistant Dean

Dr. Mohammed Chyad Liegy

16 /10/2024

The file was reviewed by:

Quality Assurance and University Performance Division:

Hamza Omar siddeeq

Signature: 

The Dean

Professor: Omar Khalil Ahmed

Academic program description

Ministry of Higher Education and Scientific Research	**Name of educational institution**
Northern Technical University / Al-Huwayjah Technical Institute	**,Name of university college or institute**
Optometry Techniques Department	**Name of the scientific department or program**
Diploma in Optometry Technology	**Final academic certificate**
Decisions	**Academic system**
Theoretical study with practical study	**Accredited Program**
Field visits to hospitals and graduation projects	**External indicators**
16/10/2024	**Description preparation date**

The department aims to graduate qualified technical staff to examine and correct vision and manufacture eyeglasses.

1- Graduating specialized staff to work in hospitals, eye examination centers and workshops. Public and private clinics.

-2The department graduate will be able to examine and diagnose vision defects in patients.

-3It can determine the degree of vision and correct strabismus.

-4-Prescribing eyeglasses, fitting lenses, and repairing damaged eyeglasses.

-5Checking lenses, changing frames, and replacing damaged ones.

-6Description and installation of contact lenses and eye replacements...

-7Taking care of, using and maintaining medical and optical devices.

Academic Program Objectives of the Department of Optometry

Required outputs

The department aims to graduate qualified technical personnel to examine and correct vision and manufacture eyeglasses.

-1-Applying and practicing the information practically in hospitals and eye examination centers.

-2Ability to use and maintain optical laboratory equipment.

-3-Analyze the results and use them to solve problems and obstacles to reach satisfactory results.

Cognitive objectives -1

-1Knowledge and full familiarity with the basics of vision examination and vision correction techniques.

-2Organizing information, understanding it and preparing for its use in the job.

-3-Work on solving problems in an intellectual way and according to the available data.

-4-Continue thinking and creativity according to scientific and intellectual data.

Skill objectives -2

This academic programme description provides a concise summary of the programme's key objectives, required outcomes, teaching and learning methods, assessment methods and educational inputs, with the expected outcomes of the student demonstrating whether he/she

has made the most of the opportunities available and accompanied by a description of each.Included in the program.

Teaching and learning methods

-1-Preparing modern and internationally approved curricula.

-2Using scientific films and practical application in laboratories.

-3-Training students on methods that simulate reality.

Evaluation methods

-1Daily tests.

-2Semester exams.

-3-Writing weekly reports on practical experiments and discussing them.

-4Daily attendance, class activities and participation.

-5Asking repeated questions and asking for answers.

-6Solve examples and discuss.

-7Summer training and graduation projects.

Course Description

First level -1

First semester

The first semester lasts for fifteen weeks with final exams lasting two weeks. The student must pass the exams with a grade of no less than (50 %) for all the courses of the semester and is considered to have met the requirements for entry into the second semester. The student is not considered to have met the requirements if he does not pass the aforementioned grade requirement and must repeat the courses in which he received a grade of less than (50 .(%

Northern Technical University								
Al-Huwayjah Technical Institute								
Department of Optometry Techniques								
Curriculum System / Curricula for Medical Specialties / Department of Optometry Techniques 2024-2025								
First academic level / first program:								
Code	Requirement type	Number of units	Number of hours			Course name in English	Course name in Arabic	T
			M	A	n			
OPT111	Mandatory section	3	3	2	1	Principles of eyeglasses	Principles of eyeglasses	1
OPT112	Mandatory section	3	3	2	1	Principles of refractive errors	Principles of refractive errors	2
OPT113	Mandatory section	3	3	2	1	Medical Physics	Medical physics	3
OPT115	Mandatory section	3	3	2	1	Foundations of nursing	Nursing basics	4
TIHA106	Mandatory institute	4	4	2	2	physiology	Physiology	5
TIHA107	Mandatory institute	4	4	2	2	Anatomy	Anatomy	6
NTU 102	University mandatory	2	2	1	1	Computer	Computer	7
NTU 100	University mandatory	2	2		2	Human Rights and democracy	Democracy and human rights	8
NTU 101	University mandatory	2	2		2	English language	English language	9
		26	26	13	13	the total		

Course Description

Level 1

Second semester

The second semester lasts for fifteen weeks with final exams lasting two weeks. The student must pass the exams with a grade of no less than (50 %) for all the semester courses and is considered to have completed the second semester. He is not considered to have completed the exams if he does not pass the aforementioned grade requirement and the student must repeat .the courses in which he obtained a grade of less than (50 %)

First academic level / Second program:								
Code	Requirement type	Number of units	Number of hours			Course name in English	Course name in Arabic	T
			M	A				
OPT121	Mandatory section	3	3	2	1	Therapeutic eyeglasses	Therapeutic glasses	1
OPT122	Mandatory section	3	3	2	1	General refractive errors	Common refractive errors	2
OPT123	Mandatory section	3	3	2	1	Optical physics	Optical physics	3
OPT124	Mandatory section	3	3	2	1	Eye phyiology	Physiology of the eye	4
OPT125	Mandatory section	3	3	2	1	Eye anatomy	Anatomy of the eye	5
OPT126	Mandatory section	3	3	2	1	Medical microbiology	Medical biology	6
OPT127	Mandatory section	3	3	2	1	Ocular health	Eye health	7
NTU 104	Optional	2	2	1	1	Sport	Sports	8
NTU 103	University mandatory	2	2		2	Arabic language	Arabic	9
TIHA108	Mandatory Institute	2	2		2	Safety in lab . & Workshop	Laboratory Safety	10
		27	27	15	12	the total		

Course Description

Level 2

First semester

The first semester lasts for fifteen weeks with final exams lasting two weeks. The student must pass the exams with a grade of no less than (50 %) for all the courses of the semester and is considered to have met the requirements for entry into the second semester. The student is not considered to have met the requirements if he does not pass the aforementioned grade requirement and must repeat the courses in which he received a grade of less than (50 .(%

Second level of study / first program:								
Code	Requirement type	Number of units	Number of hours			Course name in English	Course name in Arabic	T
			M	A				
OPT211	Mandatory section	3	3	2	1	General prescription glasses	General eyeglasses	1
OPT212	Mandatory section	3	3	2	1	Specialized refractive errors	Specialized refractive errors	2
OPT213	Mandatory section	3	3	2	1	General squint	About a year	3
OPT214	Mandatory section	3	3	2	1	Optical medical devices	Medical Optical Devices	4
OPT215	Optional section	3	3	2	1	Eye diseases	Eye diseases	5
TIHA209	Mandatory Institute	2	2		2	Medical terminology	Medical terms	6
TIHA202	Mandatory Institute	2	2		2	Biostatistics	Vital statistics	7
NTU 201	University mandatory	2	2	1	1	Computer	Computer	8
NTU 203	University mandatory	2	2		2	Crimes of the Baath regime in Iraq	Crimes of the Baath regime in Iraq	9
		23	23	11	12	the total		

Course Description

Level 2

Second semester

The second semester lasts for fifteen weeks with final exams lasting two weeks. The student must pass the exams with a grade of no less than (50 %) for all the semester courses and is considered to have completed the second semester. He is not considered to have completed the exams if he does not pass the aforementioned grade requirement and the student must repeat .the courses in which he obtained a grade of less than (50 %)

Second level of study / Second program:								
Code	Requirement type	Number of units	Number of hours			Course name in English	Course name in Arabic	T
			M	A				
OPT221	Mandatory section	3	3	2	1	Advanced medical glasses	Advanced eyeglasses	1
OPT222	Mandatory section	3	3	2	1	Applications of refractive errors	Refractive Error Applications	2
OPT223	Mandatory section	3	3	2	1	Advanced squint	About Advanced	3
OPT224	Mandatory section	3	3	2	1	Optical equipment	Optical equipment	4
OPT225	Mandatory section	3	3	2	1	Advanced eye diseases	Advanced eye diseases	5
NTU 204	University mandatory	2	2		2	Professional ethics	Professional ethics	6
OPT226	Mandatory section	2	2		2	Research project	Research project	7
NTU 202	University mandatory	2	2		2	Arabic language	Arabic	8
		21	21	10	11	the total		

10- Planning for personal development

1- Updating curricula to keep pace with scientific developments **2- Preparing training courses for members to increase their scientific skills** **3- Focus on the practical side and summer training to increase the practical experience of the graduate**
11- Admission Criteria (Setting regulations for admission to a college or institute)
Scientific branch middle school graduates
12- The most important sources of information about the program
1.The textbooks prescribed by the Northern Technical University - **2- .Resources available in the institute's library or on the Internet**

Curriculum Skills Chart																			
.Please tick the boxes corresponding to the individual learning outcomes of the programme being assessed																			
Required learning outcomes of the program																			
and transferable skills (other skills related to employability and personal (development				Emotional and value goals				Program specific skill objectives				Cognitive objectives				essential Or optional	Course name	Course code	Year/Level
D 4																			
V																	essential	Principles of eyeglasses		the first

V																essential	Therapeutic glasses		
V																essential	General eyeglasses		the second
V																essential	Advanced eyeglasses		

13. Course structure

Evaluation method	Teaching method	Name of unit/course or topic	Required learning outcomes	Watches	The week
/ Chapter One General eyeglasses					
Daily exa ,m semester exa ,m practical report and practical exam	theoretical lectures and two hours laboratory	Types of ,glasses purpose of using medical glasses	Theoretical knowledge and practical application	3	1
Theoretical test + s practical test + s reports	Theoretical 1 hou + r practical 2 hours	Safety ,glasses types, uses	Theoretical knowledge and practical application	3	2
Theoretical	Theoretical 1	The effect of ultraviolet	Theoretical knowledge and	3	3

test + s practical test + s reports	hou + r practical 2 hours	rays on the eye	practical application		
Theoretical test + s practical test + s reports	Theoretical 1 hou + r practical 2 hours	Installing eyeglass lenses	Theoretical knowledge and practical application	3	4
Theoretical test + s practical test + s reports	Theoretical 1 hou + r practical 2 hours	Axis ,direction systems used to measure the direction of the lens axis	Theoretical knowledge and practical application	3	5
Theoretical test + s practical	Theoretical 1 hou + r practical 2	Optical lens theory	Theoretical knowledge and practical application	3	6

test + s reports	hours				
Theoretical test + s practical test + s reports	Theoretical 1 hour + r practical 2 hours	Optical lens power measurement	Theoretical knowledge and practical application	3	7
Theoretical test + s practical test + s reports	Theoretical 1 hour + r practical 2 hours	Spherical lens surface strength and shape	Theoretical knowledge and practical application	3	8
Theoretical test + s practical test + s reports	Theoretical 1 hour + r practical 2 hours	Glass ,lenses their components	Theoretical knowledge and practical application	3	9

Theoretical + spractical test + s reports	Theoretical 1 hour + r practical 2 hours	Plastic ,lenses their characteristics, how they are made	Theoretical knowledge and practical application	3	10
Theoretical + spractical test + s reports	Theoretical 1 hour + r practical 2 hours	Properties of crossed cylindrical lenses	Theoretical knowledge and practical application	3	11
Theoretical + spractical test + s reports	Theoretical 1 hour + r practical 2 hours	Lens center shift	Theoretical knowledge and practical application	3	12
Theoretical test	Theoretical 1 hou	Examples of crossed cylindrical lenses	Theoretical knowledge and	3	13

+ s pra ctic al test + s rep orts	+ r pra ctic al 2 hou rs		practical application		
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	bifocal lenses	Theoretical knowledge and practical application	3	1 4
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Using two-focal lenses	Theoretical knowledge and practical application	3	1 5
Chapter Two / Advanced Eyeglasses					
Dail y exa ,m sem est er exa	the ore tica l lect ure s and	Advantages of using two focal length lenses	Theoretical knowledge and practical application	3	1

,m pra ctic al rep ort and pra ctic al exa m	two hou rs lab orat ory				
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	The size and shape of the near part of a two-focal length lens	Theoretical knowledge and practical application	3	2
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Examples of how to calculate the portion allocated to the relative(1)	Theoretical knowledge and practical application	3	3
The ore tica l test	The ore tica l 1 hou	Examples of how to calculate the portion	Theoretical knowledge and	3	4

+ s pra ctic al test + s rep orts	+ r pra ctic al 2 hou rs	allocated to the relative(2)	practical application		
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Examples of calculating the mutation resulting from the use of lenses with two focal lengths	Theoretical knowledge and practical application	3	5
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Contact lenses(1)	Theoretical knowledge and practical application	3	6
The ore tica l test + s pra ctic al test	The ore tica l 1 hou + r pra ctic al 2	Contact lenses(2)	Theoretical knowledge and practical application	3	7

+ s rep orts	hou rs				
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Types of contact lenses	Theoretical knowledge and practical application	3	8
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	How to put contact lenses in the eye	Theoretical knowledge and practical application	3	9
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Contact lens stability in the eye	Theoretical knowledge and practical application	3	1 0

Theoretical + spractical test + sreports	Theoretical 1 hou + rpractical 2 hours	Damage caused by misuse of contact lenses	Theoretical knowledge and practical application	3	11
Theoretical + spractical test + sreports	Theoretical 1 hou + rpractical 2 hours	How to calculate contact lens	Theoretical knowledge and practical application	3	12
Theoretical + spractical test + sreports	Theoretical 1 hou + rpractical 2 hours	Discussion of reports on contact lenses	Theoretical knowledge and practical application	3	13
Theoretical test	Theoretical 1 hou	Discussion of reports on	Theoretical knowledge and	3	14

+ s pra ctic al test + s rep orts	+ r pra ctic al 2 hou rs	medical lenses	practical application		
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Discussion of reports on eyeglass frames	Theoretical knowledge and practical application	3	1 5

14. Course structure					
Evaluation method	Teaching method	Name of unit/course or topic	Required learning outcomes	Watches	The week
/ Chapter One General eyeglasses					
Daily exa ,m semester exa ,m practical report and practical exam	theoretical lectures and two hours laboratory	Types of ,glasses purpose of using medical glasses	Theoretical knowledge and practical application	3	1
Theoretical test + s practical test + s reports	Theoretical 1 hou + r practical 2 hours	Safety ,glasses types, uses	Theoretical knowledge and practical application	3	2
Theoretica	Theoretica	The effect of ultraviolet	Theoretical knowledge	3	3

l test + s practical test + s reports	l 1 hou + r practical 2 hours	rays on the eye	and practical application		
Theoretical test + s practical test + s reports	Theoretical 1 hour + r practical 2 hours	Installing eyeglass lenses	Theoretical knowledge and practical application	3	4
Theoretical test + s practical test + s reports	Theoretical 1 hour + r practical 2 hours	Axis ,direction systems used to measure the direction of the lens axis	Theoretical knowledge and practical application	3	5
Theoretical test + s practic	Theoretical 1 hour + r practic	Optical lens theory	Theoretical knowledge and practical application	3	6

al test + s reports	al 2 hours				
Theoretical test + s practical test + s reports	Theoretical 1 hour + r practical 2 hours	Optical lens power measurement	Theoretical knowledge and practical application	3	7
Theoretical test + s practical test + s reports	Theoretical 1 hour + r practical 2 hours	Spherical lens surface strength and shape	Theoretical knowledge and practical application	3	8
Theoretical test + s practical test + s	Theoretical 1 hour + r practical 2 hours	Glass ,lenses their components	Theoretical knowledge and practical application	3	9

reports					
Theoretical test + spractical test + sreports	Theoretical 1 hou + rpractical 2 hours	Plastic ,lenses their characteristics, how they are made	Theoretical knowledge and practical application	3	10
Theoretical test + spractical test + sreports	Theoretical 1 hou + rpractical 2 hours	Properties of crossed cylindrical lenses	Theoretical knowledge and practical application	3	11
Theoretical test + spractical test + sreports	Theoretical 1 hou + rpractical 2 hours	Lens center shift	Theoretical knowledge and practical application	3	12
Theore	Theore	Examples of crossed	Theoretical	3	13

tica l test + s pra ctic al test + s rep orts	tica l 1 hou + r pra ctic al 2 hou rs	cylindrical lenses	knowledge and practical application		
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	bifocal lenses	Theoretical knowledge and practical application	3	1 4
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Using two-focal lenses	Theoretical knowledge and practical application	3	1 5
Chapter Two / Advanced Eyeglasses					
Dail y exa ,m sem	the ore tica l lect	Advantage s of using two focal length lenses	Theoretical knowledge and	3	1

est er exa ,m pra ctic al rep ort and pra ctic al exa m	ure s and two hou rs lab orat ory		practical application		
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	The size and shape of the near part of a two-focal length lens	Theoretical knowledge and practical application	3	2
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Examples of how to calculate the portion allocated to the relative(1)	Theoretical knowledge and practical application	3	3
The ore	The ore	Examples of how to	Theoretical	3	4

tica l test + s pra ctic al test + s rep orts	tica l 1 hou + r pra ctic al 2 hou rs	calculate the portion allocated to the relative(2)	knowledge and practical application		
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Examples of calculating the mutation resulting from the use of lenses with two focal lengths	Theoretical knowledge and practical application	3	5
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Contact lenses(1)	Theoretical knowledge and practical application	3	6
The ore tica l test + s pra	The ore tica l 1 hou + r pra	Contact lenses(2)	Theoretical knowledge and practical application	3	7

ctic al test + s rep orts	ctic al 2 hou rs				
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Types of contact lenses	Theoretical knowledge and practical application	3	8
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	How to put contact lenses in the eye	Theoretical knowledge and practical application	3	9
The ore tica l test + s pra ctic al test + s	The ore tica l 1 hou + r pra ctic al 2 hou rs	Contact lens stability in the eye	Theoretical knowledge and practical application	3	10

reports					
Theoretical test + spractical test + sreports	Theoretical 1 hou + rpractical 2 hours	Damage caused by misuse of contact lenses	Theoretical knowledge and practical application	3	11
Theoretical test + spractical test + sreports	Theoretical 1 hou + rpractical 2 hours	How to calculate contact lens	Theoretical knowledge and practical application	3	12
Theoretical test + spractical test + sreports	Theoretical 1 hou + rpractical 2 hours	Discussion of reports on contact lenses	Theoretical knowledge and practical application	3	13
The ore	The ore	Discussion of reports	Theoretical	3	14

tica l test + s pra ctic al test + s rep orts	tica l 1 hou + r pra ctic al 2 hou rs	on medical lenses	knowledge and practical application		
The ore tica l test + s pra ctic al test + s rep orts	The ore tica l 1 hou + r pra ctic al 2 hou rs	Discussion of reports on eyeglass frames	Theoretical knowledge and practical application	3	1 5

15. Infrastructure	
- Basics of Eyeglasses / Haifa Rasim Hawsa / First Edition 2001 - Visual Encyclopedia of the Human Eye - / Optical Measurements Department Mohamed Saeed Ibrahim - Assistant Lieutenant	: readings ▪ Basic Texts ▪ Course books ▪ Other
1E-learning sites and virtual library	Special requirements ,including, for example) ,workshops, periodicals (software, and websites
Holding a seminar during the year to inform students of all the latest issues related to the curriculum by hosting . experienced ophthalmologists	,Social services (including ,for example, guest lectures vocational training, and (field studies

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University/Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Anatomy of the eye / OPT125
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester/Courses
7. Number of Credit Hours (Total)	A total of 45 hours at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1/ General Objective: Preparing the student to understand the scientific materials related to the basics of mortuary and eye functions. **2/ Special Objective:** To know the anatomical parts of the eye and their vital functions in detail and to study recent developments in the anatomy of the organs of the eye and the pathway of the optic nerves and the functions of the organs of the eye. Topics include anatomical and	

functional studies of eye tears, cornea, vitreous fluid in the anterior chamber, lens of the eye, vitreous, retina and sclera. In addition to the anatomy of the nerve tissue of the retina, passing through the neural pathway and the optic crossing area to the occipital lobe of the brain.
Study recent advances in the anatomy of the organs of the eye and the pathway of the optic nerves, biochemistry and physiology of the eye. Topics include anatomical and functional studies of eye tears, cornea, vitreous fluid in the anterior chamber, lens, vitreous, retina and sclera. In addition to the anatomy of the nerve tissue of the retina, passing through the neural pathway and the area of the optic crossover to the occipital lobe of the brain.
Study recent advances in the anatomy of the organs of the eye and the pathway of the optic nerves, biochemistry and physiology of the eye. Topics include anatomical and functional studies of eye tears, cornea, vitreous fluid in the anterior chamber, lens, vitreous, retina and sclera. In addition to the anatomy of the nerve tissue of the retina, passing through the neural pathway and the area of the optic crossover to the occipital lobe of the brain.

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- Identify the components of the head, neck and eye.

A2- Expanding the student's horizon in the anatomy of the eye

A3- Preparing the student to identify the anatomical parts of the human eye and the slice terminology

B - Subject-specific skills

B1 – Introduction to the study of the anatomical structure of the human eye

B2 – Approved anatomies and then start a detailed study on the anatomy of the head, neck and eye

B3 – Provide models and pictures about the lectures with a detailed explanation

Teaching and learning methods

1. Teaching the approved anatomy curriculum in a theoretical and practical manner.
2. Use all available means of education such as white board data show and showing scientific films

To discuss ideas and facts with students.

3. Provide models and pictures about the anatomical parts in proportion to the lecture with giving duties to students

Evaluation methods

1. Theoretical tests
2. Practical tests
3. Conduct weekly tests
4. Conducting final exams

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance and selflessness

C2- Providing students with knowledge of the importance of developing their ability through self-education by learning about various knowledge

C3- Giving the student the ground on which he relies during job interviews

Teaching and learning methods

1. Develop teaching curricula compatible with the approved international curricula and give theoretical and practical lectures
2. Uses of screens, data shows and practical experiences

Evaluation methods

1.Anatomical reporting

2. Include exam questions and homework issues and challenges that require the student to find the necessary solutions.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
The week	**Hours**	Required Learning Outcomes	Name of the unit/course or topic	Method of education	Evaluation method
Chapter One					
1	3	Knowledge and understanding	Description of anatomical terms	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
2	3	Knowledge and understanding	General information about the eye and its function	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
3	3	Knowledge and understanding	Anatomy of the eye ball and eye layers	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
4	3	Knowledge and understanding	Cornea , histology	Theoretical and practical lectures in a laboratory	Practical and theoretical tests

5	3	Knowledge and understanding	Sclera , histology	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
6	3	Knowledge and understanding	Iris , histology and ciliary body	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
7	3	Knowledge and understanding	Amatomy of the chambers of the eye	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
8	3	Knowledge and understanding	Retina , histology	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
9	3	Knowledge and understanding	Aqueous humor , vitreous body	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
10	3	Knowledge and understanding	Extra ocular muscle	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
11	3	Knowledge and understanding	The ocular appendages	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
12	3	Knowledge and understanding	Lacrimal system	Theoretical and practical lectures in a laboratory	Practical and theoretical tests

13	3	Knowledge and understanding	Conjunctive	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
14	3	Knowledge and understanding	Orbit	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
15	3	Knowledge and understanding	Air sinuses and its anatomical relation with the eye ball	Theoretical and practical lectures in a laboratory	Practical and theoretical tests

12. Acceptance	
Have knowledge of biology	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher **Book autopsy and functions Sameer muhamad alqasab**	Required readings: ▪ Basic texts ▪ Course Books ▪ Other
E-learning sites and virtual library	special requirements
Lectures with practical training	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Arabic Language NTU103
4. Programs in which he enters	Theoretical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester Courses
7. Number of Credit Hours (Total)	30 hours total at a rate of two hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1/ **General Objective:** Definition and introduction to the Arabic language and the stages of its formation and familiarization of students with literature through the ages	
2 / **Special goal**: to introduce students to the linguistic and literary aspects not previously studied or feed them with the new ones and the main goal is linguistic and literary culture being sections other than the exact specialization it was the main goal to overcome linguistic errors and correct linguistic and literary information as much as possible.	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

1A - Work to build a distinct personality for a student through the development of cultural and social awareness to qualify him after graduation to contribute effectively to the service of his community.

2A – Constant pursuit of searching for everything that is modern in the fields of language and introducing the student to the keys to the language that lead him to writing and proper pronunciation.

B - Subject-specific skills

B1 – Understanding the correct writing styles

B2 – Provide final keys to get rid of mistakes or avoid them as much as possible.

B3- Developing the student's language skills.

Teaching and learning methods

Develop a curriculum that is compatible with the approved official curriculum, give theoretical lectures, use the blackboard, and deliver from the display screens and explain in an attention-grabbing manner.

Evaluation methods

1. Theoretical tests.
2. Daily attendance and active participation.

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance

C2- Providing them with knowledge of the importance of developing their abilities through self-education by learning about various knowledge

C3- Emphasis on the development of students' self-skills such as sports, arts and others.

C4- Giving the student the floor on which he relies during job interviews

C5- Encouraging and training the student on how to deal with scientific facts.

Teaching and learning methods

Develop a curriculum that corresponds to the approved international curriculum and give theoretical lectures from display screens and various programs such as PowerPoint

Evaluation methods

1. Theoretical tests.
2. Daily attendance and scientific participation.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- Developing Arabic speaking skills.

D3- Developing the student's skills and perceptions.

11. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter One					
Theory tests	Theoretical lectures	**Introduction to linguistic errors - taa tied - long and open taa**	Knowledge and understanding	3	1
Theory tests	Theoretical lectures	**Rules for writing the elongated and compartment thousand – solar and lunar letters**	Knowledge and understanding	3	2
Theory tests	Theoretical lectures	**Al-Daad and Al-Zaa**	Knowledge and understanding	3	3
Theory tests	Theoretical lectures	**Hamza writing**	Knowledge and understanding	3	4
Theory tests	Theoretical lectures	**Punctuation**	Knowledge and understanding	3	5
Theory tests	Theoretical lectures	**Noun and verb and differentiate between them**	Knowledge and understanding	3	6
Theory tests	Theoretical lectures	**Effects**	Knowledge and understanding	3	7
Theory tests	Theoretical lectures	**Number**	Knowledge and understanding	3	8

Theory tests	Theoretical lectures	**Applications of common linguistic errors**	Knowledge and understanding	3	9
Theory tests	Theoretical lectures	**Noon and Tanween meanings of prepositions**	Knowledge and understanding	3	10
Theory tests	Theoretical lectures	**Formal aspects of administrative discourse**	Knowledge and understanding	3	11
Theory tests	Theoretical lectures	**The language of administrative discourse**	Knowledge and understanding	3	12
Theory tests	Theoretical lectures	**Samples of administrative correspondence**	Knowledge and understanding	3	13
Theory tests	Theoretical lectures	**Introduction to linguistic errors - taa tied - long and open taa**	Knowledge and understanding	3	14
Theory tests	Theoretical lectures	**Rules for writing the elongated and compartment thousand – solar and lunar letters**	Knowledge and understanding	3	15

12. Acceptance	
Have knowledge of Arabic	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher	Required readings: ▪ Course Textbooks ▪ External sources ▪ Assistant Lieutenant
Holding a seminar during the year through which students are informed about all matters related to the curriculum	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

English Language 1

Course Description

English must be studied to help the student write and understand the topics and skills of the engineering field, in addition to developing ideas for how to write research and presentations.

1. Course Outcomes and Methods of Teaching, Learning and Assessment

A- Cognitive objectives

- Learn how to talk to people
- Developing the skill of scientific knowledge of engineering topics
- Developing the skills of using methods to prevent the deprivation of intellectual rights
- Active participation in the classroom and interaction with students.

2. Educational institution	**Northern Technical University - Hawija Technical Institute**
3. Scientific Department / Center	**Optometry techniques Department**
4. Course Name/Code	**EnglishNTU101**
5. Available Attendance Forms	**Came**
6. Semester / Year	**Semester courses**
7. Number of Credit Hours (Total)	**30 total at a rate of two hours per week**
.8 The history of preparation of this description	**2-10-2024**

9. Course Outcomes and Methods of Teaching, Learning and Assessment:

A- Cognitive objectives

A1- Teaching simple conversation in English

A2- Use of English grammar

A3- Use English meanings and vocabulary

B - Skills objectives of the course.

B1- Proficiency in the use of English grammar

B2- Proficiency in the use of Arabic vocabulary in English

Teaching and learning methods

1. Discussion and dialogue in raising the topic
2. Using modern illustrative means such as data show to clarify the important points of the lesson
3. Preparing monthly and annual research and articles to clarify the scientific material
4. Clarifying the material in a simplified way and using modern technology in education
5. Raise questions and elicit answers from them
6. Emphasis on research method and conclusion
7. Linking the scientific material with relevant external scientific materials to reach the goal and purpose of the lesson

Evaluation methods

1. Weekly, monthly and quarterly exams
2. Preparing seminars in the classroom to discuss the lesson material to overcome the difficulties faced by some students
3. Testing students during the application phase

C- Emotional and value goals

C1- Deepening the student's self-confidence

C2- Creating a creative teacher who loves the teaching profession

C3- Providing the student with all the books, sources and external information he needs

C4- Deepening the love of the English language and practicing it

Teaching and learning methods

Discussion and dialogue in raising the topic .

Using modern illustrative means such as data show to clarify the important points of the lesson .2

Preparing monthly and annual research and articles to clarify the scientific material .3

Clarifying the material in a simplified way and using modern technology in education .4

Raise questions and elicit answers from them .5

Emphasis on research method and conclusion .6

7. Linking the scientific material with relevant external scientific materials to reach the goal and purpose of the lesson

Evaluation methods

1. Weekly, monthly and quarterly exams
2. Preparing seminars in the classroom to discuss the lesson material to overcome the difficulties faced by some students
3. Testing students during the application phase

d. General and rehabilitative skills transferred (other skills related to employability and personal development).

D1 - Providing the student with all the books, sources and external information he needs

D2- Conducting workshops inside the hall

D3- Using modern technology in discussing scientific material to clarify it more because it is one of the modern methods of education

10. Course Structure					
Evaluation method	Method of education	Unit / Subject Name	Required Learning Outcomes Achieving goals (cognitive, skill, emotional, value or general skills)	Hours	The week
Feedback and questioning	Lecture in the way of presentation and live video	The Sentence	Achieving cognitive and skill goals	2	1
Feedback and questioning	Lecture in the way of presentation and live video	Tenses	Achieving cognitive and skill goals	2	2
Feedback and questioning	Lecture in the way of presentation and live video	Tenses+ Quiz	Achieving and evaluating cognitive and **skill goals**	2	3
Feedback and questioning	Lecture in the way of presentation and live video	articles	Achieving cognitive and skill goals	2	4
Feedback and questioning	Lecture in the way of presentation and live video	demonstratives	Achieving cognitive and skill goals	2	5
Feedback and questioning	Lecture in the way of presentation and live video	How to translate the Sentence into English text?	Achieving cognitive and skill goals	2	6

Feedback and questioning	Lecture in the way of presentation and live video	Arabic text translation +Quiz	Achieving and evaluating cognitive and **skill goals**	2	7
		First monthly test	assessment	2	8
Feedback and questioning	Lecture in the way of presentation and live video	Passive voice and active voice	Achieving cognitive and skill goals	2	9
	Lecture in the way of presentation and live video	Question–tags +interrogative	Achieving cognitive and skill goals	2	10
Feedback and questioning	Lecture in the way of presentation and live video	Passage and questions	Achieving cognitive, skills **and emotional goals**	2	11
Feedback and questioning	Lecture in the way of presentation and live video	Parts of speech	Achieving cognitive and skill goals	2	12
Feedback and questioning	Lecture in the way of presentation and live video	Appropriate academic writing	Achieving cognitive and skill goals	2	13
Feedback and questioning	Lecture in the way of presentation and live video	What qualification dose the student Need to write a good paragraph? +Quiz	Achieving and evaluating cognitive and **skill goals**	2	14
First Semester Pursuit Exam				2	15

11. Infrastructure

1 Required textbooks: New Headway Plus for beginners

2 Main references (sources) :- John Soars 2012

Recommended books and references (scientific journals, reports,....): Oxford Modern English Grammar

:B. Electronic References, Internet Sites

http://owl.english.purdue.edu/handouts/grammar

- http://www.teachingenglish.org.uk/
- HTTP://EnglishPlus.com/Grammar/Contents.HTM
- http://vv.anglishlube.com/grammar/index.
- www.learnenglish.de/basics
- www.agendaweb.org

12. Course Development Plan

Equipping language laboratories with acoustic analysis devices
Add NLP vocabulary
Updating the curriculum vocabulary to keep pace with modern linguistic developments

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University/Hawija Technical Institute
2. University Department / Center	Optometry techniques department
3. Course Name/Code	Eye physiology/ OPT124
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester/Courses
7. Number of Credit Hours (Total)	A total of 45 hours at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1. Identify the structures of the eye and its functional parts	
2. Identify physiology	
3. Identify the approved specialized lessons in physiology of the eye	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- Identify the physiology of organs

A2- Expanding the student's horizon in the structures of the eye and its parts

A3- Preparing the student to identify the anatomical parts of the eye and the functions of each part

B - Subject-specific skills

B1 – Introduction to the study of the anatomical structure of the eye

B2 – Identify the physiology of the eye and then start a detailed study of the structure and function of each part

B3 – Provide pictures about the lectures with a detailed explanation

Teaching and learning methods

1. Teaching the adopted physiology curriculum in theory and practice.
2. Use all available means of education such as white board data show and showing scientific films

To discuss ideas and facts with students.

3. Provide pictures about the parts of the eye and the function of each part in proportion to the lecture with giving duties to students

Evaluation methods

1. Theoretical tests
2. Practical tests
3. Conduct weekly tests
4. Conducting final exams

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance and selflessness

C2- Providing students with knowledge of the importance of developing their ability through self-education by learning about various knowledge

C3- Giving the student the ground on which he relies during job interviews

Teaching and learning methods

1. **Develop teaching curricula compatible with the approved international curricula and give theoretical and practical lectures**
2. **Uses of screens, data shows and practical experiences**

Evaluation methods

1.Reporting

2. Include exam questions and homework issues and challenges that require the student to find the necessary solutions.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
The week	Hours	Required Learning Outcomes	Name of the unit/course or topic	Method of education	Evaluation method
Chapter One					
1	3	Knowledge and understanding	Optic nerve	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
2	3	Knowledge and understanding	Function of the eye	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
3	3	Knowledge and understanding	Function of the cornea and its nerve supply	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
4	3	Knowledge and understanding	Iris and its function and its reflexes	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
5	3	Knowledge and understanding	Lens	Theoretical and practical lectures in a laboratory	Practical and theoretical tests

6	3	Knowledge and understanding	Accommodation	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
7	3	Knowledge and understanding	Change of accommodation according to the eye	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
8	3	Knowledge and understanding	Lacrimal system and tear	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
9	3	Knowledge and understanding	Vitreous body	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
10	3	Knowledge and understanding	Function and physiology muscle of the eye	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
11	3	Knowledge and understanding	Eye member	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
12	3	Knowledge and understanding	Movement and reflexes of the eye lid	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
13	3	Knowledge and understanding	Aqueous humour	Theoretical and practical lectures in a laboratory	Practical and theoretical tests
14	3	Knowledge and understanding	The light and its effected on the eye	Theoretical and practical lectures in a laboratory	Practical and theoretical tests

15	3	Knowledge and understanding	Visual acuity	Theoretical and practical lectures in a laboratory	Practical and theoretical tests

12. Acceptance	
Have knowledge of biology	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher **Book autopsy and functions of the eye Sameer muhamad alqasab**	Required readings: ▪ Basic texts ▪ Course Books ▪ Other
E-learning sites and virtual library	special requirements
Theoretical lectures with practical training	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Foundations of Nursing OPT115
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester Courses
7. Number of Credit Hours (Total)	30 hours total at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1/ **General objective:** to identify the principles of nursing.	
2 / **Special objective:** to identify the basics of nursing, first aid, laboratory and professional safety in the field of nursing and methods of dealing with the patient	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

1A - **Definition of nursing and clarify its tasks in a clear manner and the concept and methodology of nursing and its importance**

2A - Clarification of the concept of tracking and its importance in practice

3A - Clarify vital signs and their example (body temperature, types of oysters used for this), pulse, pulse measurement areas, factors affecting the pulse, and practical application.

B - Subject-specific skills

B1 – The skill of conducting a blood test to give a picture of the extent to which the organs of the body are working properly.

B2 – The skill of using special devices for conducting various examinations.

Teaching and learning methods

1- Develop a curriculum that corresponds to the approved international curriculum and give theoretical lectures from display screens and various programs such as PowerPoint

2- Presenting anatomical models and detailed paintings, in addition to the explanatory videos presented in lectures.

Evaluation methods

1. Theoretical tests.
2. Preparing weekly reports and seminars.
3. Daily attendance and scientific participation.

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance

C2- Providing them with knowledge of the importance of developing their abilities through self-education by learning about various knowledge

C3- Emphasis on the development of students' self-skills such as sports, arts and others.

C4- Giving the student the floor on which he relies during job interviews

C5- Encouraging and training the student on how to deal with scientific facts.

Teaching and learning methods

Develop a curriculum that corresponds to the approved international curriculum and give theoretical lectures from display screens and various programs such as PowerPoint

Evaluation methods

1. Theoretical tests.
2. Preparing weekly reports and seminars.
3. Daily attendance and scientific participation.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and

electronically
D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter One					
Theoretical and practical tests	Theoretical and practical lectures	Definition, concept, methodology and importance of nursing	Knowledge and understanding	3	1
Theoretical and practical tests	Theoretical and practical lectures	Bandages and their types	Knowledge and understanding	3	2
Theoretical and practical tests	Theoretical and practical lectures	Sterilization methods and the importance of each	Knowledge and understanding of sterilization tools	3	3
Theoretical and practical tests	Theoretical and practical lectures	General and eye disinfectants and sterilizers	Knowledge and understanding	3	4
Theoretical and practical tests	Theoretical and practical lectures	Surgical instruments used in dressing	Knowledge and understanding	3	5
Theoretical and practical tests	Theoretical and practical lectures	Types of wounds and ambulance	Knowledge and understanding	3	6

Theoretical and practical tests	Theoretical and practical lectures	Hemorrhage and its types	Knowledge and understanding	3	7
Theoretical and practical tests	Theoretical and practical lectures	Bleeding in the eye	Knowledge and understanding	3	8
Theoretical and practical tests	Theoretical and practical lectures	General rules for ambulance bleeding in the eye	Knowledge and understanding	3	9
Theoretical and practical tests	Theoretical and practical lectures	Antibiotics and their importance	Knowledge and understanding	3	10
Theoretical and practical tests	Theoretical and practical lectures	Body Temperature , Thermometer	Knowledge and understanding	3	11
Theoretical and practical tests	Theoretical and practical lectures	The pulse, its importance, its measurement sites, its indicators	Knowledge and understanding	3	12
Theoretical and practical tests	Theoretical and practical lectures	blood pressure	Knowledge and understanding	3	13
Theoretical and practical tests	Theoretical and practical lectures	Muscular effort and its effects	Knowledge and understanding	3	14
Theoretical and practical tests	Theoretical and practical lectures	Breathing and suffocation, gas poisoning	Knowledge and understanding	3	15

12. Acceptance	
Have knowledge of biology	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of

	students

13. Infrastructure	
Lectures prepared by the teacher 1- First Aid Guide, World Health ,Organization. PDF 2. Sparks and Taylor's Nursing Diagnosis Pocket Guide, Ralphs S.S., Lippincott Williams & Wikins.	Required readings: ▪ Course Textbooks ▪ External sources ▪ Assistant Lieutenant
Holding a seminar during the year through which students are informed about all matters related to the curriculum	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University/Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	General Anatomy / TIH107
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester/Courses
7. Number of Credit Hours (Total)	A total of 45 hours at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1. Learn about the anatomical terminology of the human body	
2. Identify the organs of the human body	
3. Identify the structures of human organ parts	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- Identify the components of the head, neck and eye.

A2- Expanding the student's horizon in human anatomy

A3- Preparing the student to identify the anatomical parts of the human body and slice terminology

B - Subject-specific skills

B1 – Introduction to the study of the anatomical structure of the human body

B2 – Approved anatomies and then start a detailed study on the anatomy of the head, neck and eye

B3 – Provide models and pictures about the lectures with a detailed explanation

Teaching and learning methods

1. Teaching the approved anatomy curriculum in a theoretical and practical manner.
2. Use all available means of education such as white board data show and showing scientific films

To discuss ideas and facts with students.

3. Provide models and pictures about the anatomical parts in proportion to the lecture with giving duties to students

Evaluation methods

1. Theoretical tests
2. Practical tests
3. Conduct weekly tests
4. Conducting final exams

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance and selflessness

C2- Providing students with knowledge of the importance of developing their ability through self-education by learning about various knowledge

C3- Giving the student the ground on which he relies during job interviews

Teaching and learning methods

1. Develop teaching curricula compatible with the approved international curricula and give theoretical and practical lectures
2. Uses of screens, data shows and practical experiences

Evaluation methods

1.Anatomical reporting

2. Include exam questions and homework issues and challenges that require the student to find the necessary solutions.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	**Hours**	**The week**
Chapter One					
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Description of anatomical terms	Knowledge and understanding	3	1
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Basic anatomical structures (skin fascia, muscles… etc)	Knowledge and understanding	3	2
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Body cavities	Knowledge and understanding	3	3
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	The bones and joints	Knowledge and understanding	3	4

Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Bones of the skull	Knowledge and understanding	3	5
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Bones of the skull cont , meninges	Knowledge and understanding	3	6
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Parts of the brain	Knowledge and understanding	3	7
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Blood supply and veins of the brain	Knowledge and understanding	3	8
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Cranial nerves	Knowledge and understanding	3	9
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Scalp	Knowledge and understanding	3	10
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Face (skin, sensory n., blood supply	Knowledge and understanding	3	11
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Face (lymphatic drainage, bones, paranasal sinuses)	Knowledge and understanding	3	12

Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Face (muscles of the face)	Knowledge and understanding	3	13
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Face (mandible, tempromandibular jt.)	Knowledge and understanding	3	14
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	The orbit	Knowledge and understanding	3	15

12. Acceptance	
Have knowledge of biology	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher	Required readings: ▪ Basic texts ▪ Course Books ▪ Other

Book autopsy and functions Sameer muhamad alqasab	
E-learning sites and virtual library	special requirements
Lectures with practical training	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry Techniques Department
3. Course Name/Code	OPT122 General Refractive Errors
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	Theoretical and practical
6. Semester / Year	Semester/Courses
7. Number of Credit Hours (Total)	A total of 45 hours at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
Course Objectives	
1. **The student is able to identify and diagnose refractive errors in the eye.**	
2. **Introducing the student to the ability to distinguish between the types of refractive errors in the eye.**	
3. **Training the student on how to examine refractive errors of the eye and write the prescription.**	

9. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

1) **Know the types of refractive errors in general.**
2) Expanding the student's horizon to distinguish between the types of refractive errors in the eye .
3) Preparing the student to continue self-learning Discuss refractive errors in the eye.

B - Subject-specific skills

1) Skills of examining vision and searching for refractive error in the eye through practical application.
2) Ability to distinguish between negative, positive and cylindrical power lenses
3) Ability to **examine refractive errors of the eye and write a prescription** .

Teaching and learning methods

1. Teaching the principles of refractive errors theoretically and practically.
2. Use all available means of education such as white board data show and showing scientific films

lView all information to students.

3. Perform practical exercises in the refractive errors laboratory.

Evaluation methods

1. Preparing classroom and homework assignments
2. Reporting on practical exercises
3. Conduct short, daily and quarterly tests
4. Conduct final exams

C- Thinking skills

C1- The ability to understand the components of refractive media in the eye on a scientific basis.

C2- The ability to check the vision easily and quickly to shorten the time.

C3- The ability to detect and correct refractive errors using appropriate lenses.

Evaluation methods

1) Preparing reports and studies on real problems and how to address them, results and conclusions achieved
2) Include exam questions, homework and challenges that require the student to find the necessary solutions.

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

1) The ability to work with others with discipline within the same team (teamwork)
2) Ability to present, discuss and defend ideas orally, in writing and electronically
3) Ability to understand and understand the English language and within the technical level related to the field of specialization

10. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter One					
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Learn about the visual acuity test for near vision	Visual acuity for near vision	3	1
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Identify many new examples of calculating refractive errors using retinoscopy	Calculation of refractive errors	3	2
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Identify optical lenses, their definition and types	The concept of optical lenses	3	3
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	The concept of the unit of measurement of the lens	The power of optical lenses	3	4
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Methods of writing lens power	Description of lenses	3	5
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Lens strength, polar strength, equivalent force	Lens axes	3	6
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Study of methods for measuring lens strength, electrode strength	Examination of lenses	3	7

Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Application methods for refractive errors in the eye and their diagnosis	diagnosis	3	8
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Reception of the patient and confirmation of the basic information of the patient's complaint	Basic data for examination	3	9
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Hyperopia with age	Farsightedness	3	10
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Examination method using autologous retinoscopy	Autologous retinoscopy	3	11
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Examination by objective refraction, simple retinoscopy	Objective refraction	3	12
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Use line, electroretinoscopy	Electroendoscopy	3	13
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Writing the prescription after an eye exam	Prescription	3	14
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Housing inspection after correction or air conditioning	Adaptive Inspection	3	15

11. Acceptance

Average requirement according to central admission	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

12. Infrastructure	
Lectures prepared by the teacher	**Required readings:** ▪ **Basic texts** ▪ **Course Books** ▪ **Other**
1.Work on continuous in the laboratory. **2. Urging students to use all available means for accurate diagnosis.** **3. Search through the Internet on up-to-date information in the field of prescription writing and implementation.**	Special requirements (e.g. workshops, periodicals, software and websites)
Holding a seminar during the year through which students are informed about all recent .matters related to the curriculum	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Human Rights and Democracy NTU 100
4. Programs in which he enters	Theoretical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester Courses
7. Number of Credit Hours (Total)	30 hours total at a rate of two hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1. General Objective: **Dental rights aim to achieve cultural progress among the people, to achieve social welfare, and to protect the fundamental freedom of the individual in general by respecting his fundamental rights to freedom, justice and equality.**	
2. Special Objective: Human rights aim to ensure cooperation and harmony between the existing political system (government) and the people, and therefore they seek in their goal to achieve a great deal of consensual relationship between the people and between them, and unlike them, they fail to achieve their aspirations. Democracy aims to ensure cooperation and harmony between the existing political system (government) and the people, and therefore it seeks in its goal to achieve a	

great deal of compatible relationship between the people and between it, and unlike it, it fails to achieve its aspirations.

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- The student's ability to understand the rights and freedoms enjoyed by the citizen.

A2- Knowledge of international and domestic laws that contribute to respect for human rights.

A3- Knowledge of the guarantees of the application of international and domestic human rights.

B - Subject-specific skills

B 1 – The student acquires knowledge of political forms and systems.

B2 – Knowledge of international and internal laws that deal with different societies and respect for human rights B 3 – The ability to understand the rights and freedoms enjoyed.

Teaching and learning methods

Develop a curriculum that corresponds to the approved international curriculum and give theoretical lectures from display screens and various programs such as PowerPoint

Evaluation methods

1. Theoretical tests.
2. Preparing weekly reports and seminars.
3. Daily attendance and scientific participation.

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance

C2- Providing them with knowledge of the importance of developing their abilities through self-education by learning about various knowledge

C3- Emphasis on the development of students' self-skills such as sports, arts and others.

C4- Giving the student the ground on which he relies during job interviews.

Teaching and learning methods

Develop a curriculum that corresponds to the approved international curriculum and give theoretical lectures from display screens and various programs such as PowerPoint

Evaluation methods

1. Theoretical tests.
2. Preparing weekly reports and seminars.
3. Daily attendance and scientific participation.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter One					
Theory tests	Theoretical lectures	**Human rights - definition - objectives** **Human rights in ancient civilizations, especially the civilization of Mesopotamia**	Learning about human rights in various civilizations in Iraq	2	1
Theory tests	Theoretical lectures	**Human rights in heavenly laws with a focus on human rights in Islam**	Learn about human rights in different religions	2	2
Theory tests	Theoretical lectures	**Human Rights in Contemporary and Modern History – International Recognition of Human Rights since World War I and League / United Nations**	Knowledge and understanding	2	3
Theory tests	Theoretical lectures	**Regional recognition of human rights European Convention on Human Rights 1950 American Convention**	Knowledge and understanding	2	4
Theory tests	Theoretical lectures	**NGOs and human rights (ICRC, Amnesty International, Human Rights Watch, National Human Rights Organizations)**	Knowledge and understanding	2	5
Theory tests	Theoretical lectures	**Human rights in Iraqi constitutions between theory and reality**	Knowledge and understanding	2	6

Theory tests	Theoretical lectures	**The relationship between human rights and public freedoms:** **1- In the Universal Declaration of Human Rights** **In regional charters and national constitutions**	Knowledge and understanding	2	7
Theory tests	Theoretical lectures	**Economic, social and cultural human rights and civil and political human rights**	Knowledge and understanding	2	8
Theory tests	Theoretical lectures	**Democracy**	Knowledge and understanding	2	9
Theory tests	Theoretical lectures	**Democracy, definition, types**	Knowledge and understanding	2	10
Theory tests	Theoretical lectures	**Concepts of democracy**	Knowledge and understanding	2	11
Theory tests	Theoretical lectures	**Democracy in the Third World**	Knowledge and understanding	2	12
Theory tests	Theoretical lectures	**Democracies in the world**	Knowledge and understanding	2	13
Theory tests	Theoretical lectures	**Fundamental freedoms, intellectual freedoms, economic and social freedoms**	Knowledge and understanding	2	14
Theory tests	Theoretical lectures	**Human rights - definition - objectives** **Human rights in ancient civilizations, especially the civilization of Mesopotamia**	Knowledge and understanding	2	15

12. Acceptance	
Have knowledge of literary and cognitive materials	Prerequisites
25 students	Minimum number of students

60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher 	Required readings: ▪ Course Textbooks ▪ External sources ▪ Assistant Lieutenant
Holding a seminar during the year through which students are informed about all matters related to the curriculum	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Laboratory Safety TIDO109
4. Programs in which he enters	Theoretical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester Courses
7. Number of Credit Hours (Total)	30 hours total at a rate of two hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	

GENERAL OBJECTIVES: **TO FAMILIARIZE THE STUDENT WITH THE SAFETY AND SECURITY RULES IN LABORATORIES AND WORKSHOPS**

SPECIFIC OBJECTIVES :

1- TO HAVE THE ABILITY TO DEAL WITH SOURCES OF HAZARDS IN LABORATORIES AND WORKSHOPS

2- TO HAVE THE ABILITY TO THINK CORRECTLY AND TAKE APPROPRIATE ACTION IN THE EVENT OF ANY CIRCUMSTANCE IN THE LABORATORY

3- TO IDENTIFY THE DANGERS OF FIRES, HOW TO DEAL WITH THEM AND THE RULES OF FIRE PREVENTION

4- TO IDENTIFY THE TYPES OF HAZARDS THAT CAN BE EXPOSED TO IN LABORATORIES

5- TO FAMILIARIZE HIMSELF WITH THE SAFETY GUIDELINES IN LABORATORIES AND WORKSHOPS

6- TO KNOW WHAT SHE MUST DO BEFORE AND AFTER PERFORMING PRACTICAL EXPERIMENTS

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

1- TO IDENTIFY THE TYPES OF HAZARDS THAT CAN BE EXPOSED TO IN LABORATORIES

2- TO KNOW THE SAFETY INSTRUCTIONS IN LABORATORIES AND WORKSHOPS

B - Subject-specific skills

1 B- **TO KNOW WHAT SHE SHOULD DO BEFORE AND AFTER PERFORMING PRACTICAL EXPERIMENTS**

2B - TO HAVE THE ABILITY TO THINK CORRECTLY AND TAKE APPROPRIATE ACTION IN THE EVENT OF ANY CIRCUMSTANCE IN THE LABORATORY

3B - TO IDENTIFY THE DANGERS OF FIRES AND HOW TO DEAL WITH THEM AND THE RULES OF FIRE PREVENTION

Teaching and learning methods

1- Develop a curriculum that corresponds to the approved international curriculum and give theoretical lectures from display screens and various programs such as PowerPoint
2- Presenting anatomical models and detailed paintings, in addition to the explanatory videos presented in lectures.

Evaluation methods

1. Theoretical tests.
2. Preparing weekly reports and seminars.
3. Daily attendance and scientific participation.

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance

C2- Providing them with knowledge of the importance of developing their abilities through self-education by learning about various knowledge

C3- Emphasis on the development of students' self-skills such as sports, arts and others.

C4- Giving the student the floor on which he relies during job interviews

C5- Encouraging and training the student on how to deal with scientific facts.

Teaching and learning methods

Develop a curriculum that corresponds to the approved international curriculum and give theoretical lectures from display screens and various programs such as PowerPoint

Evaluation methods

1. Theoretical tests.
2. Preparing weekly reports and seminars.
3. Daily attendance and scientific participation.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
The week	Hours	Required Learning Outcomes	Name of the unit/course or topic	Method of education	Evaluation method
Chapter One					
1	2	Knowledge and understanding	Basic equipment to be available in the laboratory (laboratory arrangements)	Theoretical lectures	Theory tests
2	2	Knowledge and understanding	Safety precautions when handling laboratory instruments, chemicals	Theoretical lectures	Theory tests
3	2	Knowledge and understanding	Safety precautions upon completion of laboratory work and storage and preservation of materials	Theoretical lectures	Theory tests

4	2	Knowledge and understanding	Fires and their types. And the means to extinguish it	Theoretical lectures	Theory tests
5	2	Knowledge and understanding	Personal Protective Equipment	Theoretical lectures	Theory tests
6	2	Knowledge and understanding	Chemical hazards - and how to deal with them	Theoretical lectures	Theory tests
7	2	Knowledge and understanding	Radiological hazards	Theoretical lectures	Theory tests
8	2	Knowledge and understanding	Biological hazards	Theoretical lectures	Theory tests
9	2	Knowledge and understanding	Laboratory (medical) waste disposal Use of warning signs in the laboratory	Theoretical lectures	Theory tests
10	2	Knowledge and understanding	First aid in laboratories	Theoretical lectures	Theory tests
11	2	Knowledge and understanding	Other environmental factors and their impact on safety and health (light, noise, heat, humidity)	Theoretical lectures	Theory tests
12	2	Knowledge and understanding	Safety in Field Studies	Theoretical lectures	Theory tests

13	2	Knowledge and understanding	Basic equipment to be available in the laboratory (laboratory arrangements)	Theoretical lectures	Theory tests
14	2	Knowledge and understanding	Safety precautions when handling laboratory instruments, chemicals	Theoretical lectures	Theory tests
15	2	Knowledge and understanding	Safety precautions upon completion of laboratory work and storage and preservation of materials	Theoretical lectures	Theory tests

12. Acceptance	
Have knowledge of the health and safety of laboratory workers	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher	Required readings: ▪ Course Textbooks ▪ External sources ▪ Assistant Lieutenant
Holding a seminar during the year through which students are informed about all matters related to the curriculum	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Medical biology OPT126
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester Courses
7. Number of Credit Hours (Total)	30 hours total at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1/ General objective: Knowledge of microbiology and parasites that cause eye and body diseases and methods of isolation.	
2 / Special objective: to train the student to understand the cases of eye diseases, treatment and nursing and maintain eye health.	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

1A - Knowledge of microorganisms and their interactions with vital and abiotic components present in the environment.

2A - Identify the forms of tissues and their mutations, and introduce medical microbiology with other sciences and its importance for students of vision examination techniques.

3A - Study of microorganisms such as germs, viruses, fungi and parasites that cause eye diseases

4A - Obtaining basic information for microbiology and providing a broad base of knowledge and understanding of microbiology.

B - Subject-specific skills

B1 – The skill of conducting a blood test to give a picture of the extent to which the organs of the body are working properly.

B2 – The skill of using special devices for conducting various examinations.

Teaching and learning methods

1- Develop a curriculum that is compatible with the approved international curriculum and give theoretical lectures from display screens and various programs such as Bourboin

2- Presenting anatomical models and detailed paintings, in addition to the explanatory videos presented in lectures.

Evaluation methods

1. Theoretical tests.
2. Preparing weekly reports and seminars.
3. Daily attendance and scientific participation.

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance

C2- Providing them with knowledge of the importance of developing their abilities through self-education by learning about various knowledge

C3- Emphasis on the development of students' self-skills such as sports, arts and others.

C4- Giving the student the floor on which he relies during job interviews

C5- Encouraging and training the student on how to deal with scientific facts.

Teaching and learning methods

Develop a curriculum that corresponds to the approved international curriculum and give theoretical lectures from display screens and various programs such as PowerPoint

Evaluation methods

1. Theoretical tests.
2. Preparing weekly reports and seminars.
3. Daily attendance and scientific participation.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter One					
Theoretical and practical tests	Theoretical and practical lectures	Isolate bacteria by cultivating and dyeing them (gram dye)	Knowledge and understanding of bacteria	3	1
Theoretical and practical tests	Theoretical and practical lectures	Bacterial infection of the eye	Knowledge and understanding of bacteria	3	2
Theoretical and practical tests	Theoretical and practical lectures	Sterilization and disinfection (physical and chemical methods)	Knowledge and understanding of sterilization tools	3	3
Theoretical and practical tests	Theoretical and practical lectures	General parasitology (types of parasitoids, city causing parasitic diseases	Knowledge and understanding of parasites	3	4

Theoretical and practical tests	Theoretical and practical lectures	General classification of parasites (parasites, amoebae and flagella)	Knowledge and understanding of parasites	3	5
Theoretical and practical tests	Theoretical and practical lectures	General classification of parasites (parasites, cilia, spores)	Knowledge and understanding of parasites	3	6
Theoretical and practical tests	Theoretical and practical lectures	General classification of parasites (helminths, nematodes)	Knowledge and understanding of parasites	3	7
Theoretical and practical tests	Theoretical and practical lectures	General classification of parasites (helminths, tapeworms and worms)	Knowledge and understanding of parasites	3	8
Theoretical and practical tests	Theoretical and practical lectures	Parasites (helminths , E.)	Knowledge and understanding of parasites	3	9
Theoretical and practical tests	Theoretical and practical lectures	Human chromosomes (shape and structure)	Knowledge and understanding	3	10
Theoretical and practical tests	Theoretical and practical lectures	Bacteria (isolation and staining of bacteria)	Knowledge and understanding	3	11
Theoretical and practical tests	Theoretical and practical lectures	Bacteria (gram-positive and gram-negative bacteria, their forms and order)	Knowledge and understanding	3	12
Theoretical and practical tests	Theoretical and practical lectures	Bacteria (culture media, types and characteristics)	Knowledge and understanding	3	13
Theoretical and practical tests	Theoretical and practical lectures	Parasites (Helminths , A. lumbricoides vermcularis)	Knowledge and understanding	3	14
Theoretical and practical tests	Theoretical and practical lectures	Parasites (helminths, cyhistosoma species, filarilla, saginata/ granuiosus)	Knowledge and understanding	3	15

12. Acceptance	
Have knowledge of biology	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher **Basic Histology** **Human Histology** **Medical Biology** **Micro Biology**	Required readings: ▪ Course Textbooks ▪ External sources ▪ Assistant Lieutenant
Holding a seminar during the year through which students are informed about all matters related to the curriculum	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Medical Physics OPT113-
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester Courses
7. Number of Credit Hours (Total)	45 hours total at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1. General Objective: At the end of the semester, the student will be able to understand visual phenomena in physics and be familiar with the basics of light.	
2. Special Objective: To identify the phenomena of reflection and refraction of light in reflected and refracted media and the applications of related laws. **3. Light recognition, electromagnetic spectrum, rainbow formation** **4. Identify optical phenomena such as reflection, refraction, polarization and diffraction** **5. Identify mirrors and their types and solve their problems and the telescope as one of its applications.** **6. Identify prisms and lenses, their types and defects, and solve their own problems.** **7. Identify the eye, its parts and the devices used in its examination.** **8. Identify and correct how to see, refractive errors that affect the eye.**	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- Understanding and interpreting visual and natural phenomena.

A2- Study the laws that express the relationships between phenomena and variables.

A3- Knowledge of the principles of the work of physical devices.

B - Subject-specific skills

B1 – The student acquires skill in conducting experiments and reaching the desired results.

B2 – The student acquires the skill of using physical devices

B3 – The student acquires skill in drawing devices and graphing experiments and researching physico-visual problems

Teaching and learning methods

1. Teaching medical physics in a theoretical and practical manner compatible with the approved international curricula and giving theoretical and practical scientific lectures through display screens, PowerPoint programs and practical experiments in real and virtual laboratories software.
2. Use all available means of education such as white board data show and showing scientific films

To discuss ideas and facts with students.

3. Conducting practical experiments through the physics laboratory.

Evaluation methods

1. Preparing class assignments
2. Reporting on practical experiences
3. Conduct daily and quarterly exams
4. Conducting final exams

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance

C2- Providing them with knowledge of the importance of developing their abilities through self-education by learning about various knowledge

C3- Emphasis on the development of students' self-skills.

C4- Giving the student the ground on which he relies during job interviews.

Teaching and learning methods

1. Include the vocabulary of the curriculum of medical physics and the latest scientific findings in this field of using physics in the medical fields.
2. Include in the vocabulary of the curriculum solving realistic problems in the field.

Evaluation methods

1. Preparing reports and studies on real problems and how to address them, results and conclusions achieved
2. Include exam questions and homework issues and challenges that require the student to find the necessary solutions.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter One					
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Occupational safety programs and work quality assurance.	Knowledge and understanding	3	1
Practical and theoretical tests and reports	**Theoretical and practical lectures**	The concept of occupational safety and its rules.	Knowledge and understanding	3	2
Practical and theoretical tests and reports	**Theoretical and practical lectures**	The light , nature of the light , light sources , the theories of the light	Knowledge and understanding	3	3
Practical and theoretical tests and reports	**Theoretical and practical lectures**	The electromagnetic spectrum	Knowledge and understanding	3	4
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Velocity of the light , Frequency and energy of the visible light	Knowledge and understanding	3	5
Practical and theoretical tests and reports	**Theoretical and practical lectures**	The reflection , the laws of reflection , reflection at plane and spherical surfaces	Knowledge and understanding	3	6
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Propagation and Reflection of Light	Knowledge and understanding	3	7

Practical and theoretical tests and reports	**Theoretical and practical lectures**	Mirrors , types of mirrors , properties of the image formed by plane mirrors , properties of image formed by plane mirror	Knowledge and understanding	3	8
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Spherical mirrors , center of curvature , axis , vertices , focal length	Knowledge and understanding	3	9
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Concave mirror , properties of image formed by concave mirror	Knowledge and understanding	3	10
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Convex mirror , properties of image formed by convex mirror	Knowledge and understanding	3	11
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Real and virtual images formed by reflected surfaces	Knowledge and understanding	3	12
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Refraction , the laws of refraction , refraction by plane surfaces	Knowledge and understanding	3	13
Practical and theoretical tests and reports	**Theoretical and practical lectures**	The refractive index , relative refractive index	Knowledge and understanding	3	14
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Factors affecting the refractive index	Knowledge and understanding	3	15

12. Acceptance	
Have knowledge of physics	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher **Eton Noori – Samir Muhammad Al-Qasab** **Book project** **Optical physics**	Required readings: ▪ Course Textbooks ▪ External sources ▪ Assistant Lieutenant
1. Work on the computer in the laboratory. **2. Urging students to use and maintain physical devices and not to be afraid of conducting experiments.** **3. Discuss the results they get among themselves and encourage them to excel.**	Special requirements (e.g. workshops and experiments)
Holding a seminar during the year through which students are informed about all modern matters related to the curriculum.	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

Northern Technical University / Hawija Technical Institute	1. Educational institution
Optometry techniques Department	2. University Department / Center
Ocular healthOPT127	3. Course Name/Code
Theoretical and practical programs	4. Programs in which he enters
weekly	5. Available Attendance Forms
Semester Courses	6. Semester / Year
45 hours total at a rate of 3 hours per week	7. Number of Credit Hours (Total)
02/04/2024	8. The history of preparation of this description
9. Course Objectives	
1. General Objective: To identify the possibility of distinguishing between emergency cases and cold cases that affect the eye	
2. **Special goal:** to identify eye diseases and how to treat them.	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- Introducing the student to the diseases that affect the eye.

A2- Introducing the student to the possibility of distinguishing between emergency cases and cold cases that affect the eye.

A3- Introducing the student to chronic diseases that affect the eye.

B - Subject-specific skills

B1 – Introduction to the study of terms for the eye.

B 2 – Illustrative pictures of different positions around the eye and a definition of the eye procedure.

B3 – Use special devices to know and evaluate eye problems.

Teaching and learning methods

1- Develop curricula for eye health and teach them theoretically and practically compatible with the approved international curricula and give theoretical and practical scientific lectures through the use of all available means of education such as the white board data show and the presentation of scientific films to discuss ideas and facts with students.

2- Providing different cases of people with different problems to students through field visits to health centers.

Evaluation methods

1. Preparing class assignments
2. Reporting on practical experiences
3. Conduct daily and quarterly exams
4. Conducting final exams

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance

C2- Providing them with knowledge of the importance of developing their abilities through self-education by learning about various knowledge

C3- Emphasis on the development of students' self-skills.

C4- Giving the student the ground on which he relies during job interviews.

Teaching and learning methods

1- Develop curricula for eye health and teach them theoretically and practically compatible with the approved international curricula and give theoretical and practical scientific lectures through the use of all available means of education such as the white board data show and the presentation of scientific films to discuss ideas and .facts with students

.

2. Include in the vocabulary of the curriculum solving realistic problems in the field.

Evaluation methods

1. Preparing reports and studies on real problems and how to address them, results and conclusions achieved
2. Include exam questions, homework and challenges that require the student to find the necessary solutions.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter One					
Practical and theoretical tests and reports	Theoretical and practical lectures	Breathing and suffocation, gas poisoning	Knowledge and understanding	3	1
Practical and theoretical tests and reports	Theoretical and practical lectures	Artificial Respiration (1)	Knowledge and understanding	3	2
Practical and theoretical tests and reports	Theoretical and practical lectures	Artificial Respiration (2)	Knowledge and understanding	3	3
Practical and theoretical tests and reports	Theoretical and practical lectures	Eye accidents and how to nurse them	Knowledge and understanding	3	4
Practical and theoretical tests and reports	Theoretical and practical lectures	Foreign bodies in the eye and their types	Knowledge and understanding	3	5

Practical and theoretical tests and reports	Theoretical and practical lectures	First aid, types, importance	Knowledge and understanding	3	6
Practical and theoretical tests and reports	Theoretical and practical lectures	Burns, types, how to treat them	Knowledge and understanding	3	7
Practical and theoretical tests and reports	Theoretical and practical lectures	Burns to the eye, how to nurse it	Knowledge and understanding	3	8
Practical and theoretical tests and reports	Theoretical and practical lectures	Eye Health Care	Knowledge and understanding	3	9
Practical and theoretical tests and reports	Theoretical and practical lectures	Explanation of the survey form in eye health	Knowledge and understanding	3	10
Practical and theoretical tests and reports	Theoretical and practical lectures	Application for field survey in eye health (1)	Knowledge and understanding	3	11
Practical and theoretical tests and reports	Theoretical and practical lectures	Discussion and evaluation of survey results (1)	Knowledge and understanding	3	12
Practical and theoretical tests and reports	Theoretical and practical lectures	Application for field survey in eye health (2)	Knowledge and understanding	3	13
Practical and theoretical tests and reports	Theoretical and practical lectures	Discussion and evaluation of survey results (2)	Knowledge and understanding	3	14
Practical and theoretical tests and reports	Theoretical and practical lectures	Prevention of blindness	Knowledge and understanding	3	15

12. Acceptance	
Have knowledge of biology	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher	Required readings: ▪ Course Textbooks ▪ External sources ▪ Assistant Lieutenant
E-learning sites and virtual library	Special requirements (e.g. workshops and experiments)
Holding a seminar during the year through which students are informed about all modern matters related to the curriculum.	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Optical Physics OPT123
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester Courses
7. Number of Credit Hours (Total)	45 hours total at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1. General Objective: At the end of the semester, the student will be able to understand visual phenomena in physics and be familiar with the basics of light.	
2. Special Objective: To identify the phenomena of reflection and refraction of light in reflected and refracted media and the applications of related laws. **3. Light recognition, electromagnetic spectrum, rainbow formation** **4. Identify optical phenomena such as reflection, refraction, polarization and diffraction** **5. Identify mirrors and their types and solve their problems and the telescope as one of its applications.** **6. Identify prisms and lenses, their types and defects, and solve their own problems.**	

7. **Identify the eye, its parts and the devices used in its examination.**
8. **Identify and correct how to see, refractive errors that affect the eye.**

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- Understanding and interpreting visual and natural phenomena.

A2- Study the laws that express the relationships between phenomena and variables.

A3- Knowledge of the principles of the work of physical devices.

B - Subject-specific skills

B1 – The student acquires skill in conducting experiments and reaching the desired results.

B2 – The student acquires the skill of using physical devices

B3 – The student acquires skill in drawing devices and graphing experiments and researching physico-visual problems

Teaching and learning methods

1. Teaching medical physics in a theoretical and practical manner compatible with the approved international curricula and giving theoretical and practical scientific lectures through display screens, PowerPoint programs and practical experiments in real and virtual laboratories software.
2. Use all available means of education such as white board data show and showing scientific films

To discuss ideas and facts with students.

3. Conducting practical experiments through the physics laboratory.

Evaluation methods

1. Preparing class assignments
2. Reporting on practical experiences
3. Conduct daily and quarterly exams
4. Conducting final exams

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance

C2- Providing them with knowledge of the importance of developing their abilities through self-education by learning about various knowledge

C3- Emphasis on the development of students' self-skills.

C4- Giving the student the ground on which he relies during job interviews.

Teaching and learning methods

1. Include the vocabulary of the curriculum of medical physics and the latest scientific findings in this field of using physics in the medical fields.
2. Include in the vocabulary of the curriculum solving realistic problems in the field.

Evaluation methods

1. Preparing reports and studies on real problems and how to address them, results and conclusions achieved
2. Include exam questions and homework issues and challenges that require the student to find the necessary solutions.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter One					
Practical and theoretical tests and reports	**Theoretical and practical lectures**	How does light travel through the eye?	Knowledge and understanding	3	1
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Total internal reflection , critical angle	Knowledge and understanding	3	2
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Reflection by plane parallel plate	Knowledge and understanding	3	3
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Refraction by a prism	Knowledge and understanding	3	4
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Convention of signs for distance	Knowledge and understanding	3	5
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Refraction at spherical surfaces	Knowledge and understanding	3	6
Practical and theoretical tests and reports	**Theoretical and practical lectures**	The lens , first focal point , second focal point , focal length , types of lens	Knowledge and understanding	3	7

Practical and theoretical tests and reports	**Theoretical and practical lectures**	Gaussian law , magnification	Knowledge and understanding	3	8
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Convex lens , properties of image formed by convex lens	Knowledge and understanding	3	9
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Concave lens , properties of image formed by concave lens	Knowledge and understanding	3	10
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Compound lens , Newton equation	Knowledge and understanding	3	11
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Lens maker's equation , power of lens	Knowledge and understanding	3	12
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Aberrations of lens , chromatic aberrations , monochromatic aberrations	Knowledge and understanding	3	13
Practical and theoretical tests and reports	**Theoretical and practical lectures**	Coma aberration , Astigmatism , field curvatures , Distortion aberration	Knowledge and understanding	3	14
Practical and theoretical tests and reports	**Theoretical and practical lectures**	The Eye and the Optical Instruments	Knowledge and understanding	3	15

12. Acceptance	
Have knowledge of physics	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher **Eton Noori – Samir Muhammad Al-Qasab** **Book project** **Optical physics**	Required readings: ▪ Course Textbooks ▪ External sources ▪ Assistant Lieutenant
1. Work on the computer in the laboratory. **2. Urging students to use and maintain physical devices and not to be afraid of conducting experiments.** **3. Discuss the results they get among themselves and encourage them to excel.**	Special requirements (e.g. workshops and experiments)
Holding a seminar during the year through which students are informed about all modern matters related to the curriculum.	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	General Physiology / TIH106
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester/Courses
7. Number of Credit Hours (Total)	A total of 45 hours at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1. Identify the structures of members and their functional parts	
2. Identify organ physiology	
3. Identify the approved specialized lessons in general physiology	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- Identify the physiology of organs

A2- Expanding the student's horizon in the structures of members and their parts

A3- Preparing the student to identify the anatomical parts of the organs and the functions of each part

B - Subject-specific skills

B1 – Introduction to the study of the anatomical structure of organs

B2 – Identify the general physiology and then start a detailed study of the structure and function of each part

B3 – Provide pictures about the lectures with a detailed explanation

Teaching and learning methods

1. Teaching the general physiology curriculum adopted theoretically and practically.

2. Use all available means of education such as white board data show and showing scientific films

To discuss ideas and facts with students.

3. Provide pictures about the parts of the members and the function of each part in proportion to the lecture with giving duties to students

Evaluation methods

1. Theoretical tests

2. Practical tests

3. Conduct weekly tests

4. Conducting final exams

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance and selflessness

C2- Providing students with knowledge of the importance of developing their ability through self-education by learning about various knowledge

C3- Giving the student the ground on which he relies during job interviews

Teaching and learning methods

1. **Develop teaching curricula compatible with the approved international curricula and give theoretical and practical lectures**

2. Uses of screens, data shows and practical experiences

Evaluation methods

1.Reporting

2. Include exam questions and homework issues and challenges that require the student to find the necessary solutions.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter One					
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Introduction to Physiology	Knowledge & Understanding	3	1
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Introduction to Endocrine system	Knowledge & Understanding	3	2
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Metabolism and energy balance.	Knowledge & Understanding	3	3
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Endocrine control of growth and metabolism	Knowledge & Understanding	3	4
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Endocrine control of growth and metabolism	Knowledge & Understanding	3	5
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	nervous system Neural Physiology	Knowledge & Understanding	3	6
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Central Nervous System peripheral system.	Knowledge & Understanding	3	7

Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Muscles.	Knowledge & Understanding	3	8
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Cardiovascular Physiology.	Knowledge & Understanding	3	9
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Cardiovascular Physiology.	Knowledge & Understanding	3	10
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Blood respiratory system.	Knowledge & Understanding	3	11
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Kidneys.	Knowledge & Understanding	3	12
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Immune system	Knowledge & Understanding	3	13
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Digestive system.	Knowledge & Understanding	3	14
Practical and theoretical tests	Theoretical and practical lectures in a laboratory	Development and reproduction.	Knowledge & Understanding	3	15

12. Acceptance	
Have knowledge of biology	Prerequisites
25 students	Minimum number of students
30 students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher	Required readings: ▪ Basic texts

Text book: human physiology an integrated approach,7th2016	▪ Course Books ▪ Other
E-learning sites and virtual library	special requirements
Lectures with practical training	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University/Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Principles of Computer NTU102
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester Courses
7. Number of Credit Hours (Total)	30 hours total at a rate of two hours per week
8. The history of preparation of this description	02/10/2024
Course Objectives	
1. **Identify the hard and soft components of the computer and the role of software in them.**	
2. **Providing students with skills to deal with basic office applications**	
3. **Learn how to create office files and documents using the computer**	
4. **Learn how to use the operating system as well as the basics of working within the digital environment.**	

9. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

1) **Know the hard and soft components of the computer and the role of programs in them.**
2) Expanding the student's horizon in his field of dealing with the computer.
3) Preparing the student to continue self-learning and learning to use the computer operating system .

B - Subject-specific skills

1) Skills of dealing with basic desktop computer applications through practical application.
2) The ability to create and arrange files for the purpose of quick benefit when needed.
3) The ability to use computer keys for the purpose of quick access to the required task.

Teaching and learning methods

1. Teaching computer principles in theory and practice.
2. Use all available means of education such as white board data show and showing scientific films

lView all information to students.

3. Perform practical exercises in the computer lab.

Evaluation methods

1. Preparing classroom and homework assignments
2. Reporting on practical exercises
3. Conduct short, daily and quarterly tests
4.Conduct final exams

C- Thinking skills

C1- The ability to understand the components of the computer and deal with them on a scientific basis.

C2- The ability to use programs easily and quickly to shorten time.

A3- The ability to detect and correct programming errors in a script and make the text more streamlined.

Evaluation methods

1) **Preparing reports and studies on real problems and how to address them, results and conclusions achieved**
2) **Include exam questions, homework and challenges that require the student to find the necessary solutions.**

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

1) The ability to work with others with discipline within the same team (teamwork)
2) Ability to present, discuss and defend ideas orally, in writing and electronically
3) Ability to understand and understand the English language and within the

10. Course Structure

The week	Hours	Required Learning Outcomes	Name of the unit/course or topic	Method of education	Evaluation method
Chapter One					
1	3	Introduction to Computer Parts	Computer Fundamentals The concept of the computer stages of the computer life cycle - the development of generations	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
2	3	Computer interface recognition	Learn about the components of the interface and the role of each part	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
3	3	Computer advantages and areas of use	Classification of the computer in terms of purpose, size, type and data	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
4	3	Computer physical parts Software components	Study the input orders and the terms of use of each command	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
5	3	Organize your PC	Learn how to format programs	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
6	3	Computer Security, Software Licenses	Computer privacy Study how to implement the program	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports

7	3	The ethics of the electronic world – forms of transgressions	Study the execution of a software task coupled with the fulfillment of a specific condition	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
8	3	Computer software licenses and types, intellectual property, electronic penetration, malware	The most important steps necessary to protect against hacking, computer damage to health	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
9	3	Types of operating systems	Definition of operating system, functions, objectives Classification Examples of some operating systems	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
10	3	Windows7	Learn how to turn on Windows 7 Operating System	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
11	3	Folders and files icons	Study how files and icons are arranged	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
12	3	Forms of education Classroom, mixed and full dependence on the Internet	Study how to solve programming problems in the computer	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
13	3	Windows Control Panel Categories	Quick access to programs and searching for lost files	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
14	3	Organizing the control panel in the files inside the computer,	Installing and deleting programs Learn computer programming	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports
15	3	Some common cases and settings in the computer	, Printer Management / Time and Date Settings, Primary Disk Maintenance	Theoretical and practical lectures in the laboratory	Practical and theoretical tests and reports

11. Acceptance	
Average requirement according to central admission	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

12. Infrastructure	
Lectures prepared by the teacher	Required readings: ▪ Basic texts ▪ Course Books ▪ Other
1. Work on the computer in the laboratory. **2. Encourage students to use programs on the computer.** **3. Search through the Internet on modern information in the field of programming and computers.**	Special requirements (e.g. workshops, periodicals, software and websites)
Holding a seminar during the year through which students are informed about all recent .matters related to the curriculum	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Principles of Eyeglasses / OPT111
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester / Courses
7. Number of Credit Hours (Total)	A total of 45 hours at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1. The student must have learned the technical basics in cutting and trimming the lenses and installing them in the frame using the available devices	
2. The student must have learned a high degree of proficiency in how to implement the prescription, prepare glasses and check conformity	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- Identify the eye examination and dispense eyeglasses.

A2- Introducing the student to information about the examination and writing the prescription for glasses.

A3- Introduce the student to the methods and how to make eyeglasses for the patient.

B - Subject-specific skills

B1 – Introduction to the study of glasses in terms of examination and writing the result for the patient.

B2 – Use different lenses for reading.

B3 – The use of vision examination devices to identify short-sightedness or distance sightedness.

Teaching and learning methods

1.Develop teaching curricula compatible with the approved international curricula and give theoretical and practical lectures according to a modern system.

2. Presentation of visual devices for students and how to use them.

Evaluation methods

1.Theoretical tests
2.Practical tests
3. Weekly Reports
4. Daily attendance and public participation

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance

C2- The ability to build an integrated program that works logically and smoothly.

C3- Giving the student the ground on which he relies during job interviews.

Teaching and learning methods

1. Teaching the subject of eyeglasses theoretically and practically compatible with the approved international curricula and giving theoretical and practical scientific lectures through display screens, PowerPoint programs and practical experiments in real and virtual laboratories programming.

2. Presenting students' visual devices and how to use them to determine the degree of vision.

Evaluation methods

1- Develop teaching curricula compatible with the approved international curricula and give theoretical and practical lectures according to a modern

system of display screens and educational seminars

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand within the technical level related to the field of competence

11. Course Structure					
The week	Hours	Required Learning Outcomes	Name of the unit/course or topic	Method of education	Evaluation method
Chapter One					
1	3	Theoretical knowledge and practical application	Eyeglasses, parts, types	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
2	3	Theoretical knowledge and practical application	Optical lenses	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
3	3	Theoretical knowledge and practical application	Types of lenses, their manufacture	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
4	3	Theoretical knowledge and practical application	Lens measurement unit	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
5	3	Theoretical knowledge and practical application	Extraction of lens axes	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
6	3	Theoretical knowledge and practical application	Equation of lens axes	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
7	3	Theoretical knowledge and practical application	How to write lens power	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
8	3	Theoretical knowledge and practical application	Prescription Writing	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
9	3	Theoretical knowledge and practical application	Types of fosmetre	Theoretical and practical lectures in the laboratory	Practical and theoretical tests

10	3	Theoretical knowledge and practical application	Measuring the power of the lens with a fosmetre	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
11	3	Theoretical knowledge and practical application	Eyeglass tires, types, parts	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
12	3	Theoretical knowledge and practical application	Materials used in the tire industry	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
13	3	Theoretical knowledge and practical application	Natural and industrial materials used in the manufacture of glasses frame	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
14	3	Theoretical knowledge and practical application	Metal materials used in the manufacture of glasses frames (1)	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
15	3	Theoretical knowledge and practical application	Metal materials used in the manufacture of glasses frames (2)	Theoretical and practical lectures in the laboratory	Practical and theoretical tests

12. Acceptance	
Understanding and familiarity with physics	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure

- **Basics in eyeglasses / Haifa Rasim Hosa / first edition 2001** - The visual encyclopedia of the human eye - Optical Measurements Department / Mohamed Saeed Ibrahim - Assistant Lieutenant	Required readings: ▪ Basic texts ▪ Course Books ▪ Other
1E-learning sites and virtual library	Special requirements (e.g. workshops, periodicals, software and websites)
Holding a seminar during the year through which students are informed about all modern matters related to the curriculum hosted by experienced ophthalmologists.	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Principles of Refractive Errors OPT112
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	Theoretical and practical
6. Semester / Year	Semester/Courses
7. Number of Credit Hours (Total)	A total of 45 hours at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
Course Objectives	
1. **Identify the causes of light refraction.**	
2. **Introduce the student to the types of refractive errors in the eye.**	
3. **Identify the causes of refractive errors in the eye.**	
4. **Training the student on how to examine refractive errors of the eye and write the prescription.**	

9. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

1) **Know the reasons for light refraction in general.**
2) Expanding the student's horizon to distinguish between the types of refractive errors in the eye .
3) Preparing the student to continue self-learning Discuss refractive errors in the eye.

B - Subject-specific skills

1) Skills of examining vision and searching for refractive error in the eye through practical application.
2) Ability to distinguish between negative, positive and cylindrical power lenses
3) Ability to **examine refractive errors of the eye and write a prescription** .

Teaching and learning methods

1. Teaching the principles of refractive errors theoretically and practically.
2. Use all available means of education such as white board data show and showing scientific films
lView all information to students.
3. Perform practical exercises in the refractive errors laboratory.

Evaluation methods

1. Preparing classroom and homework assignments
2. Reporting on practical exercises
3. Conduct short, daily and quarterly tests
4.Conduct final exams

C- Thinking skills

C1- The ability to understand the components of refractive media in the eye on a scientific basis.
C2- The ability to check the vision easily and quickly to shorten the time.
C3- The ability to detect and correct refractive errors using appropriate lenses.

Evaluation methods

1) **Preparing reports and studies on real problems and how to address them, results and conclusions achieved**
2) **Include exam questions, homework and challenges that require the student to find the necessary solutions.**

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

1) The ability to work with others with discipline within the same team (teamwork)
2) Ability to present, discuss and defend ideas orally, in writing and electronically
3) Ability to understand and understand the English language and within the technical level related to the field of specialization

10. Course Structure					
The week	**Hours**	Required Learning Outcomes	Name of the unit/course or topic	Method of education	Evaluation method
Chapter One					
1	3	Introduction to light refraction	Identify the concept of refraction basics Refraction and its relationship to the density of the refractive medium	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
2	3	Diopter system of the eye	recognize the path of light, its refraction through the diopter system, how the eye sees and the function of each part	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
3	3	Refractive defects	What are refractive defects and their classification?	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
4	3	Eye allergies	Retinal photosensitivity study	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
5	3	Vision in the eye	How to see color types and color blindness	Theoretical and practical lectures in the laboratory	Practical and theoretical tests

6	3	Sight test	Visual acuity charts and their types	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
7	3	Eye conditioning	Study the effect of conditioning on myopia and farsightedness	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
8	3	Treatment methods	Methods of treating refractive errors and the degree of refractive error	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
9	3	Presbyopia	Ages of presbyopia and types of treatment	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
10	3	Myopia, causes and types	Learn how to turn on Windows 7 Operating System	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
11	3	Myopia	Myopia, causes, types, method of diagnosis and treatment	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
12	3	Pupils and its amount	Explain and clarify the idea of changing the hole with illustrations	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
13	3	Deviation of vision	Astigmatism, its causes and types	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
14	3	The mechanism of treatment of deviation in the eye	Methods of treatment of astigmatism	Theoretical and practical lectures in the laboratory	Practical and theoretical tests
15	3	Healthy vision	Remote visual acuity test	Theoretical and practical lectures in the laboratory	Practical and theoretical tests

11. Acceptance	
Average requirement according to central admission	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

12. Infrastructure	
Lectures prepared by the teacher	**Required readings:** ▪ **Basic texts** ▪ **Course Books** ▪ **Other**
1.Work on continuous in the laboratory. **2. Urging students to use all available means for accurate diagnosis.** **3. Search through the Internet on up-to-date information in the field of prescription writing and implementation.**	Special requirements (e.g. workshops, periodicals, software and websites)
Holding a seminar during the year through which students are informed about all recent .matters related to the curriculum	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Sports / NTU104
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester/Courses
7. Number of Credit Hours (Total)	Total 30 hours at a rate of two hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
General Objective: The student should be able to identify the most important types of sports and what are the laws and skills of some sports	
Special Objective: The student should be able to:	
Identify the motor mechanism of the human body and what are the common injuries that occur in the human body	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- Identify the physiology of organs

A2- Expanding the student's horizon in the structures of members and their parts

A3- Showing a film about the types of sports and what are the benefits that can benefit from the community

B - Subject-specific skills

B1 – Conducting tests for the muscles working on the joints of the body and their motor ranges

B2 – Application of the basic stages of ambulance to the injured player and according to the type and location of the injury

B3 – Apply skills individually and collectively

Teaching and learning methods

1. Teaching the general physiology curriculum adopted theoretically and practically.

2. Use all available means of education such as white board data show and showing scientific films

To discuss ideas and facts with students.

3. Provide pictures about the parts of the members and the function of each part in proportion to the lecture with giving duties to students

Evaluation methods

1. Theoretical tests
2. Practical tests
3. Conduct weekly tests
4. Conducting final exams

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance and selflessness

C2- Providing students with knowledge of the importance of developing their ability through self-education by learning about various knowledge

C3- Giving the student the ground on which he relies during job interviews

Teaching and learning methods

1. **Develop teaching curricula compatible with the approved international curricula and give theoretical and practical lectures**
2. **Uses of screens, data shows and practical experiences**

Evaluation methods

1.Reporting

2. Include exam questions and homework issues and challenges that require the student to find the necessary solutions.

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand the English language and within the technical level related to the field of competence

11. Course Structure

Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter One					
Practical and theoretical tests	Theoretical and practical lectures	Vocabulary details	Knowledge and practical application	3	1
Practical and theoretical tests	Theoretical and practical lectures	Sport definition, importance and types	Knowledge and practical application	3	2
Practical and theoretical tests	Theoretical and practical lectures	The mechanism of movement of the human body	Knowledge and practical application	3	3
Practical and theoretical tests	Theoretical and practical lectures	Common sports injuries	Knowledge and practical application	3	4
Practical and theoretical tests	Theoretical and practical lectures	Basic skills of the game of basketball	Knowledge and practical application	3	5
Practical and theoretical tests	Theoretical and practical lectures	International Basketball Law	Knowledge and practical application	3	6

Practical and theoretical tests	Theoretical and practical lectures	Basic skills of table tennis and its international law	Knowledge and practical application	3	7
Practical and theoretical tests	Theoretical and practical lectures	Basic skills of volleyball and its international law	Knowledge and practical application	3	8
Practical and theoretical tests	Theoretical and practical lectures	Swimming sport	Knowledge and practical application	3	9
Practical and theoretical tests	Theoretical and practical lectures	Basic skills of the game of tennis and its international law	Knowledge and practical application	3	10
Practical and theoretical tests	Theoretical and practical lectures	Basic skills of handball	Knowledge and practical application	3	11
Practical and theoretical tests	Theoretical and practical lectures	International Handball Law	Knowledge and practical application	3	12
Practical and theoretical tests	Theoretical and practical lectures	Arena and field games (types, international law of the game)	Knowledge and practical application	3	13
Practical and theoretical tests	Theoretical and practical lectures	Basic Football Skills	Knowledge and practical application	3	14
Practical and theoretical tests	Theoretical and practical lectures	Management of sports competitions and competitions	Knowledge and practical application	3	15

12. Acceptance	
They have knowledge of sports	Prerequisites

25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
Lectures prepared by the teacher	Required readings: ▪ Basic texts ▪ Course Books ▪ Other
E-learning sites and virtual library	special requirements
Lectures with practical training	Social services (e.g. guest lectures, vocational training and field studies)

Course Description Form

Review the performance of higher education institutions ((review of the academic program))

Course Description

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the program description.

1. Educational institution	Northern Technical University / Hawija Technical Institute
2. University Department / Center	Optometry techniques Department
3. Course Name/Code	Therapeutic eyeglasses / OPT121
4. Programs in which he enters	Theoretical and practical programs
5. Available Attendance Forms	weekly
6. Semester / Year	Semester / Courses
7. Number of Credit Hours (Total)	A total of 45 hours at a rate of 3 hours per week
8. The history of preparation of this description	02/10/2024
9. Course Objectives	
1. The student must have learned the technical basics in cutting and trimming the lenses and installing them in the frame using the available devices	
2. The student must have learned a high degree of proficiency in how to implement the prescription, prepare glasses and check conformity	

10. Learning outcomes and teaching, learning and assessment methods

A- Knowledge and understanding

A1- Identify the eye examination and dispense eyeglasses.

A2- Introducing the student to information about the examination and writing the prescription for glasses.

A3- Introduce the student to the methods and how to make eyeglasses for the patient.

B - Subject-specific skills

B1 – Introduction to the study of glasses in terms of examination and writing the result for the patient.

B2 – Use different lenses for reading.

B3 – The use of vision examination devices to identify short-sightedness or distance sightedness.

Teaching and learning methods

1.Develop teaching curricula compatible with the approved international curricula and give theoretical and practical lectures according to a modern system.

2. Presentation of visual devices for students and how to use them.

Evaluation methods

1.Theoretical tests
2.Practical tests
3. Weekly Reports
4. Daily attendance and public participation

C- Thinking skills

C1- Encouraging students to be creative and create a spirit of perseverance

C2- The ability to build an integrated program that works logically and smoothly.

C3- Giving the student the ground on which he relies during job interviews.

Teaching and learning methods

1. Teaching the subject of eyeglasses theoretically and practically compatible with the approved international curricula and giving theoretical and practical scientific lectures through display screens, PowerPoint programs and practical experiments in real and virtual laboratories programming.

2. Presenting students' visual devices and how to use them to determine the degree of vision.

Evaluation methods

1- Develop teaching curricula compatible with the approved international curricula and give theoretical and practical lectures according to a modern

system of display screens and educational seminars

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

D1- The ability to work with others with discipline within the same team (teamwork)

D2- The ability to present, discuss and defend ideas orally, in writing and electronically

D3- The ability to understand and understand within the technical level related to the field of competence

11. Course Structure					
Evaluation method	Method of education	Name of the unit/course or topic	Required Learning Outcomes	Hours	The week
Chapter Two					
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Glasses helped, types, size	Theoretical knowledge and practical application	3	1
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Distance between pupils	Theoretical knowledge and practical application	3	2
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Reflex scale and congruent measure of distance between pupils	Theoretical knowledge and practical application	3	3
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Types of bridges in glasses	Theoretical knowledge and practical application	3	4
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Methods for measuring bridges in glasses	Theoretical knowledge and practical application	3	5
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Types of facial measurements (facial dimensions)	Theoretical knowledge and practical application	3	6
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Methods of choosing the right frame	Theoretical knowledge and practical application	3	7
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Making a glasses mold	Theoretical knowledge and practical application	3	8
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Polishing and polishing lenses	Theoretical knowledge and practical application	3	9

Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Contact lenses and their types	Theoretical knowledge and practical application	3	10
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Fusimeter Applications (2)	Theoretical knowledge and practical application	3	11
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Lens Furnishing (1)	Theoretical knowledge and practical application	3	12
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Lens Lenses (2)	Theoretical knowledge and practical application	3	13
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Lens Lenses (3)	Theoretical knowledge and practical application	3	14
Practical and theoretical tests	Theoretical and practical lectures in the laboratory	Applications of Making Falbes	Theoretical knowledge and practical application	3	15

12. Acceptance	
Understanding and familiarity with physics	Prerequisites
25 students	Minimum number of students
60 Students	The largest number of students

13. Infrastructure	
- **Basics in eyeglasses / Haifa Rasim Hosa / first edition 2001** - The visual encyclopedia of the human eye - Optical Measurements Department / Mohamed Saeed Ibrahim - Assistant Lieutenant	Required readings: ▪ Basic texts ▪ Course Books ▪ Other
1E-learning sites and virtual library	Special requirements (e.g. workshops, periodicals, software and websites)
Holding a seminar during the year through which students are informed about all modern matters related to the curriculum hosted by experienced ophthalmologists.	Social services (e.g. guest lectures, vocational training and field studies)