

Republic of Iraq
Ministry of Higher Education & Scientific Research
Supervision and Scientific Evaluation Directorate
Quality Assurance and Academic Accreditation
International Accreditation Dept.

Academic Program Specification Form For The Academic Year 2026-2025

University: AL-Zahrawi University
College: College of Health and Medical Technologies
Number Of Departments In The College:
Date Of Form Completion: 2026/9/20


Prof. Dr. Majeed H.
Dean of the department
Date: 20/9/2025
Signature

Dean's Assistant For
Scientific Affairs

Date: 20 / 9 / 2025
Signature

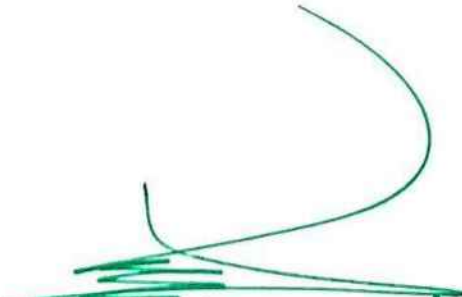
The College Quality Assurance
And University Performance
Manager

Date: 20 / 9 / 2025
Signature


A.L. Sinan Forat H. al-...

Quality Assurance And University Performance Manager

Date: 20 / 9 / 2025
Signature


Dean's Name Prof. Dr. Heba A. Al-Salam

Date: 20 / 9 / 2025

Signature

ACADEMIC PROGRAM AND COURSE DESCRIPTION

Department of Optics Technologies

Al-Zahrawi University College
Department of Optics Technologies

2025

1. Program Vision

The Department of Optics Technologies seeks to occupy a distinguished scientific position in the academic and scientific community and to play an effective and influential applied role in the field, meeting the needs of society and the requirements of the labor market. The department has a scientific staff and appropriate capacity and works toward achieving its vision.

2. Program Mission

The department aims to prepare trained and qualified cadres in the field of optics technologies, including eye examination and diagnosis of eye diseases, manufacture of spectacles and contact lenses, and the use of medical devices employed in examination and diagnosis. Graduates are prepared according to internationally recognized quality and academic accreditation standards, with the ability to analyze and diagnose optical problems in accordance with applicable standards.

3. Program Objectives

- Provide competent and qualified technical personnel in the field of eye examination and specialized areas to meet the country's needs and the requirements of medical and economic development, and to support teaching staff in universities and institutes.
- Continuously update curricula and study plans to keep pace with the latest developments in the field of eye examination and related technologies.
- Keep pace with rapid developments in information technology.
- Focus on scientific research and its essential role in serving society through applied research and research projects.
- Cooperate with relevant public-sector institutions to organize training courses that develop the capabilities of our medical and technical staff.
- Work diligently toward achieving comprehensive quality assurance.
- Encourage scientific cooperation with Arab and international universities and peer institutions and seek to exchange expertise in order to develop the department and advance the educational process.

4. Program Accreditation

No cohort has graduated yet.

5. Other External Influences

Program sponsor: Ministry of Higher Education and Scientific Research.

6. Program Structure

Institutional requirements, department requirements, and summer training are included in the program structure. The department requirements comprise 56 courses/units as shown in the original program structure.

7. Program Description

First Stage / First Semester

Academic Year	Course Code	Course Name	Theory	Practical	Credits
2024/2025	OPTS41102	Principles of Chemistry	2	4	3
2024/2025	OPTS41103	Medical Physics	2	3	5
2024/2025	OPTS41101	Anatomy	2	–	5
2024/2025	OPTS41107	English Language	2	–	2
2024/2025	OPTS41105	Computer Principles 1	2	–	2
2024/2025	OPTS41106	Human Rights	2	–	2
2024/2025	OPTS41104	Biology	2	–	2

First Stage / Second Semester

Academic Year	Course Code	Course Name	Theory	Practical	Credits
2024/2025	OPTS41202	Principles of Biochemistry 2	2	4	3
2024/2025	OPTS41203	Medical Physics 2	2	1	3
2024/2025	OPTS41201	Anatomy 2	2	–	2
2024/2025	OPTS41207	Arabic Language	2	–	2
2024/2025	OPTS41205	Computer Principles 2	1	–	2
2024/2025	OPTS41204	Biology 2	2	–	2

Second Stage / First Semester

Academic Year	Course Code	Course Name	Type
2024/2025	OPTS42103	Ocular Health	Basic
2024/2025	OPTS42104	Refractive Errors	Basic
2024/2025	OPTS42102	Optical Devices	Basic
2024/2025	OPTS42101	Physiology of the Eye and Vision	Basic
2024/2025	OPTS42105	Statistical Applications	Elective
2024/2025	OPTS42106	Medical Terminology	Elective

Second Stage / Second Semester

Academic Year	Course Code	Course Name	Type
2024/2025	OPTS42203	Ocular Health 2	Basic
2024/2025	OPTS42204	Refractive Errors 2	Basic
2024/2025	OPTS42202	Optical Devices 2	Basic
2024/2025	OPTS42201	Physiology of the Eye and Vision 2	Basic
2024/2025	OPTS42205	Statistical Applications 2	Elective
2024/2025	OPTS42207	Introduction to Ophthalmology	Basic
2024/2025	OPTS42206	Drugs	Basic
2024/2025	OPTS42208	Arabic Language	Elective

Third Stage / First Semester

Academic Year	Course Code	Course Name	Type
2024/2025	OPTS43103	Systemic Problems / Systemic Disorders 1	Basic
2024/2025	OPTS43104	Refractive Errors 3	Basic
2024/2025	OPTS43102	Optical Devices 3	Basic
2024/2025	OPTS43101	Medical Spectacles 1	Basic
2024/2025	OPTS43105	Strabismus 1	Basic
2024/2025	OPTS43107	Laser Treatment of Eye Diseases	Basic
2024/2025	OPTS43106	Computer Applications 1	Elective

Third Stage / Second Semester

Academic Year	Course Code	Course Name	Type
2024/2025	OPTS43203	Systemic Problems / Systemic Disorders 2	Basic
2024/2025	OPTS43204	Refractive Errors 4	Basic
2024/2025	OPTS43202	Optical Devices 4	Basic
2024/2025	OPTS43201	Medical Spectacles 2	Basic
2024/2025	OPTS43205	Strabismus 2	Basic
2024/2025	OPTS43207	Research Methods	Elective
2024/2025	OPTS43206	Computer Applications 2	Elective

8. Expected Learning Outcomes

- Knowledge: The student knows and understands the fundamentals of the required sciences and analyzes the required scientific details and developments.
- Graduates are prepared as scientific cadres capable of operating and maintaining medical devices used in eye examination.
- Students acquire the knowledge, intellectual and practical skills required in vision examination devices and the skills needed to deal with different eye-disease cases and intervene as required.
- Skills: Good knowledge and technical ability in the principles of optics and related sciences; correct use of equipment and practical application of learned skills.
- Values: Commitment to university institutional ethics, acceptance of knowledge, teamwork, and recognition of the importance of the study materials.

9. Teaching and Learning Methods

Theoretical and practical lectures, preparation of scientific reports, and research

10. Assessment Methods

Examinations, reports and research writing, scientific discussions, attendance, and daily activities

11. Teaching Staff

Academic Rank / Staff Member	Specialization / Qualification	Status / Requirements
Prof. Dr. Majid Hussein	Sciences	Permanent staff / courses
Asst. Lecturer Haider Ali Faleej	Arabic Language	Permanent staff / courses
Asst. Lecturer Safaa Mohammed Karoem	Veterinary Sciences	Permanent staff / courses
Asst. Lecturer Taman Kamel	General Sciences	Permanent staff / courses
Lecturer Zainab Qasim Mohammed	Sciences	Permanent staff / courses
Asst. Lecturer Enas Al-Samarqandi Ali	Medicine and Surgery / Ophthalmology	Permanent staff / courses
Asst. Lecturer Ghusun Shakir	Sciences / Physics	Permanent staff / courses
Asst. Lecturer Ali Jasim Abdul Ridha	Optics / Optometry	Permanent staff / courses
Asst. Lecturer Ahmed Hashim Mohammed	Sciences	Permanent staff / courses
Asst. Lecturer Abdul Amir	General Medicine / Diseases	Permanent staff / courses
Hussein Abdul Hamid	Pharmacy	Staff
Mohammed Abbas Saher	Law / Public Law	Staff

Teaching Staff Development

A brief description of the process used to orient new, visiting, and part-time teaching staff within the institution and department.

New teaching staff are oriented toward developing the scientific curriculum, lecture-delivery methods, and ways of communicating scientific material to students.

12. Admission Standard

Graduates of preparatory/secondary education in the scientific branch and other accepted branches are eligible for admission to the Department of Optics Technologies.

13. Most Important Information about the Program

- Prescribed books are those approved by the Ministry of Higher Education and Scientific Research.
- External scientific sources and the Internet are also used.

14. Program Development Plan

The department has several curricular and research plans for developing the department and its scientific environment through the Department Council and the Scientific Committee.

Program Skills Map – Page 8

Program Skills Map – Learning Outcomes Required from the Program

Year / Level	Course Code	Course Name	Core / Elective	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3	V4
2024/2025 – 1st Stage / 1st Semester	OPTS41102	Principles of Chemistry	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41103	Medical Physics	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41101	Anatomy	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41107	English Language	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41105	Computer Principles 1	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41106	Human Rights	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41104	Biology	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 2nd Semester	OPTS41202	Principles of Biochemistry 2	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 2nd Semester	OPTS41203	Medical Physics 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Program Skills Map – Page 9

Program Skills Map – Learning Outcomes Required from the Program

Year / Level	Course Code	Course Name	Core / Elective	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3	V4
1st Stage / 2nd Semester	OPTS41201	Anatomy 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1st Stage / 2nd Semester	OPTS41207	Arabic Language	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1st Stage / 2nd Semester	OPTS41205	Computer Principles 2	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1st Stage / 2nd Semester	OPTS41204	Biology 2	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42103	Ocular Health	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42104	Refractive Errors	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42102	Optical Devices	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42101	Physiology of the Eye and Vision	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42105	Statistical Applications	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42106	Medical Terminology	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Program Skills Map – Page 10

Program Skills Map – Learning Outcomes Required from the Program

Year / Level	Course Code	Course Name	Core / Elective	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3	V4
2nd Stage / 2nd Semester	OPTS42201	Physiology of the Eye and Vision 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42202	Optical Devices 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42208	Arabic Language	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42204	Refractive Errors 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42205	Statistical Applications 2	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42207	Introduction to Ophthalmology	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42206	Drugs	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43103	Systemic Problems / Systemic Disorders 1	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Program Skills Map – Page 11

Program Skills Map – Learning Outcomes Required from the Program

Year / Level	Course Code	Course Name	Core / Elective	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3	V4
3rd Stage / 1st Semester	OPTS43104	Refractive Errors 3	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43102	Optical Devices 3	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43101	Medical Spectacles 1	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43105	Strabismus 1	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43107	Laser Treatment of Eye Diseases	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43106	Computer Applications 1	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43203	Systemic Problems / Systemic Disorders 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43204	Refractive Errors 4	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43202	Optical Devices 4	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43201	Medical Spectacles 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Program Skills Map – Page 12

Program Skills Map – Learning Outcomes Required from the Program

Year / Level	Course Code	Course Name	Core / Elective	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3	V4
3rd Stage / 2nd Semester	OPTS43205	Strabismus 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43207	Research Methods	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43206	Computer Applications 2	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note: A check mark (✓) is placed in the cells corresponding to the program learning outcomes used for assessment.

١. اسم المقرر: الحَوَل ٣					
٢. رمز المقرر:					
٣. الفصل الدراسي الأول / المرحلة الرابعة / السنة الدراسية: ٢٠٢٥/٢٠٢٦					
٤. تاريخ إعداد الوصف: ٢٠٢٦/١/١٨					
٥. أشكال الحضور المتاحة: الحضور					
٦. عدد الساعات الدراسية الكلي / عدد الوحدات الكلي: ٢ ساعه كل اسبوع ١٥ أسبوعاً					
٧. اسم مسؤول المقرر الدراسي					
الاسم: د. إيناس الشقاوي البريد الإلكتروني: enas.el.sharkawy2016@gmail.com المؤسسة: جامعة الزهراوي , كلية التقنيات الصحية والطبية؛ القسم: تقنيات البصريات					
٨. أهداف المقرر ومخرجات التعلم					
أهداف المادة الدراسية	الهدف العام: تعلم فحص المريض وتشخيص الحَوَل وتقييمه. المعرفة والفهم: تشخيص الحَوَل الخفي وتقييمه؛ وفهم درجات الرؤية الثنائية بالعينين؛ والتعرف على جهاز السينوبتوفور واستخداماته؛ وفهم ازدواج الرؤية ومخطط هِس. المهارات الخاصة: معرفة جهاز السينوبتوفور واستخداماته، وفهم ازدواج الرؤية ومخطط هِس. مهارات التفكير: فحص حالات الحَوَل وتشخيصها.				
٩. استراتيجيات التعليم والتعلم					
الاستراتيجية	العروض باستخدام جهاز العرض (Data Show)، والمحاضرات العلمية، ومقاطع الفيديو؛ وفق ما ورد في الوصف الإنجليزي.				
10. هيكل المقرر					
الأسبوع	الساعات	مخرجات التعلم المطلوبة	اسم الوحدة أو الموضوع	طريقة التعليم	طريقة التقييم
الأول	٦	معرفة جهاز السينوبتوفور ودواعي استخدامه	جهاز السينوبتوفور: التعريف والأجزاء والاستخدامات	جهاز العرض ومقاطع فيديو ومحاضرات علمية	اختبار قصير وتقارير
الثاني	٦	معرفة درجات الرؤية الثنائية	درجات الرؤية الثنائية بالعينين	جهاز العرض ومقاطع فيديو	اختبار قصير وتقارير

		بالعينين	ومحاضرات علمية	
الثالث	٦	معرفة كيفية إجراء اختبار التقارب	اختبار التقارب البصري	جهاز العرض ومقاطع فيديو ومحاضرات علمية
الرابع	٦	غير مذكورة في المصدر	الحول الخفي: التعريف والأعراض والتقييم	جهاز العرض ومقاطع فيديو ومحاضرات علمية
الخامس	٦	معرفة العوامل التي تؤدي إلى اختلال تعويض الحول الخفي	العوامل المسببة لاختلال تعويض الحول الخفي	جهاز العرض ومقاطع فيديو ومحاضرات علمية
السادس	٦	معرفة علاج الحول الخفي	علاج الحول الخفي	جهاز العرض ومقاطع فيديو ومحاضرات علمية
السابع	٦	معرفة تمارين تقويم البصر في الغمش	تمارين تقويم البصر في الغمش (كسل العين)	جهاز العرض ومقاطع فيديو ومحاضرات علمية
الثامن	٦	معرفة العلاج النشط للغمش	العلاج النشط للغمش (كسل العين)	جهاز العرض ومقاطع فيديو ومحاضرات علمية
التاسع	٦	معرفة تمارين تقويم البصر في فرط التقارب وقصوره	تمارين تقويم البصر في فرط التقارب وقصور التقارب	جهاز العرض ومقاطع فيديو ومحاضرات علمية
العاشر	٦	معرفة العلاج البصري باستخدام الحاسوب	العلاج البصري باستخدام الحاسوب	جهاز العرض ومقاطع فيديو ومحاضرات علمية
الحادي عشر	٦	معرفة تعريف ازدواج الرؤية وأنواعه	ازدواج الرؤية: التعريف والأنواع	جهاز العرض ومقاطع فيديو ومحاضرات علمية
الثاني عشر	٦	معرفة فحص ازدواج الرؤية ومخطط هيس	ازدواج الرؤية: الفحص ومخطط هيس	جهاز العرض ومقاطع فيديو ومحاضرات علمية
الثالث عشر	٦	معرفة تفسير مخطط هيس في ازدواج الرؤية	ازدواج الرؤية: تفسير مخطط هيس	مقاطع فيديو ومحاضرات علمية
الرابع عشر	٦	غير مذكورة في،	ازدواج الرؤية: العلاج البصري المؤقت	مقاطع فيديو

المصدر	ومحاضرات علمية	وتقارير
١١. تقييم المقرر التحضير اليومي، والاختبارات القصيرة، والتقارير، والتقييم العملي، والاختبارات الشفوية والتحريرية. لم يحدد المصدر توزيع الدرجات أو الدرجة الكلية.		
١٢. مصادر التعلم والتدريس		
المراجع المطلوبة	1.Kanski 2.American academy of ophthalmology	
المراجع الرئيسة (المصادر)	1.Kanski 2.American academy of ophthalmology	
المراجع والأنشطة الساندة		
المراجع الإلكترونية ومواقع الإنترنت	PubMed	

مسؤول المقرر :د. إيناس الشرقاوي.

**Review the performance of the higher education institution
(review of the academic program)**

وصف المقرر

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

1. Educational Institution	Al-Zahrawi University – College of medical technologies
2. University Department / Center	Department of optics technologies
3. Course Name / Code	Statistical applications I
4. Programs in which it is included	Bachelor degree
5. Available Forms of Attendance	Full-time (everyday) attendance
6. Semester / Year	1st semesters/ 2025
7. Total Number of Study Hours	Theory: 1hr+ Practical: 3 hrs
8. Date of preparing this description	18-09-2026
9. Course Objectives: Learn about statistical applications, as well as medical surveys and their procedures.	
10. Learning Outcomes, Teaching and Learning Methods, and Evaluation	

A. Knowledge and Understanding

- 1- Introducing the student to the importance of biology in scientific research.**
- 2- How to prepare a medical survey plan.**
- 3- Learning how to take statistical samples.**
- 4-How to analyze and present statistical study data.**

B. Subject-Specific Skills

- 1. Providing the student with knowledge in the field of medical statistics, enabling them to translate this knowledge into action when the situation calls for a specific response to solve a problem.**
- 2. Providing the student with the necessary skills to apply the acquired knowledge to form a fundamental foundation for understanding health phenomena related to optics.**

Teaching and Learning Methods

Lecture, dialogue, discussion, examples, practical lab, and online information.

C. Evaluation Methods

Monthly exams, homework and daily student activities (daily preparation and recording of participation for each student).

D. Thinking Skills

- 1- Asking questions during the lecture, with the aim of engaging students and enabling them to answer them.**
- 2- Linking the topic of medical statistics and its applications to what happens in the environment in which students live, and the possibility of benefiting from them to facilitate life and enjoy scientific and technological achievements.**
- 3- Asking questions and researching the latest developments in medical statistics regarding technical and health applications.**

Teaching and Learning Methods

Lecture, dialogue, discussion, examples, practical lab, and online information.

Evaluation Methods

Monthly exams, homework and daily student activities (daily preparation and recording of participation for each student).

e. General and Transferable Skills

- 1- Optimal use of concepts related to medical statistics and their application to comprehensive knowledge regarding the interpretation of scientific phenomena.**
- 2- Student's handling of problems related to the interpretation of visual phenomena.**
- 3- Optimal use of statistical programs and how to interpret results.**

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11. Course Structure					
Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
1	Theory:1 hr Practice: 3 hrs	Knowledge	Introduction I: Objective of statistics and statistical methods	Board and data show	Quiz And discussion
2	Theory:1 hr Practice: 3 hrs	Knowledge	Introduction II: Objective of statistics and statistical methods	Board and data show	Quiz And discussion
3	Theory:1 hr Practice: 3 hrs	Knowledge	Source of data collection	Board and data show	Quiz And discussion
4	Theory:1 hr Practice: 3 hrs	Knowledge	Types of samples	Board and data show	Quiz And discussion
5	Theory:1 hr Practice: 3 hrs	Knowledge	Types of data: Numerical and categorical	Board and data show	Quiz And discussion
6	Theory:1 hr Practice: 3 hrs	Knowledge	Measure of central tendency	Board and data show	Quiz And discussion
7	Theory:1 hr Practice: 3 hrs	Knowledge	Measure of dispersion.	Board and data show	Quiz And discussion
8	Theory:1 hr Practice: 3 hrs	Knowledge	Skewness and kurtosis.	Board and data show	Quiz And discussion
Mid-term exam					
9	Theory:1 hr Practice: 3 hrs	Knowledge	Measure of central tendency	Board and data show	Quiz And discussion

١٠	Theory:1 hr Practice: 3 hrs	Knowledge	Measure of dispersion.	Board and data show	Quiz And discussion
١١	Theory:1 hr Practice: 3 hrs	Knowledge	Skewness and kurtosis.	Board and data show	Quiz And discussion
١٢	Theory:1 hr Practice: 3 hrs	Knowledge	Introduction to data analysis	Board and data show	Quiz And discussion
١٣	Theory:1 hr Practice: 3 hrs	Knowledge	Revision	Board and data show	Quiz And discussion
Final exam					

13. Infrastructure	
Required Readings:	References: Biostatistics: A foundation for the analysis in health science 10 th edition
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites:
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Organizing workshops and courses for graduates:

12.	
Prerequisites	
Minimum Number of Students	30
Maximum Number of Students	110

Name of the Instructor: م.م. حسنين عبد الحميد

Course Description Form

1. Course Name: Optical Medical Physics / Theoretical	
2. Course Code: OPT541203	
3. Semester 2 / Year:4 th 2025/2026	
4. Description Preparation Date:2026	
5. Available Attendance Forms: Daily attendance	
6. Number of Credit Hours (Total) / Number of Units 2 Hours (Total) 15 week	
7. Course administrator's name (mention all, if more than one name)	
Name: Prof. Dr. Majid Hussein Dweij Email: sinanalmottar@gmail.com	
8. Course Objectives	
Course Objectives	General Objective: By the end of the semester, the student will be able to

	1	

	to understand optical phenomena in physics.
	Specific Objectives

9. Teaching and Learning Strategies

Strategy	1. Cooperative concept-planning strategy. 2. Brainstorming strategy. 3. Observation-sequence strategy. 4. Presentation, training, discussion, research, and reporting
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Knowledge	Schematic and Reduced Eye – Gullstrand Schematic Eye	Use whiteboard and display	Daily exam and oral questions
2	2	Knowledge	Eye Function (myopia, hypermetropia, astigmatism)	Use whiteboard and display	Daily exam and oral questions
3	2	Knowledge	Telescope: definition, purposes, types, design, and construction	Use whiteboard and display	Daily exam and oral questions

	2	

4	2	Knowledge	Schematic and Reduced Eye – Gullstrand Schematic Eye	Use whiteboard and display	Daily exam and oral questions
5	2	Knowledge	Total Internal Reflection	Use whiteboard and display	Daily exam and oral questions
6	2	Knowledge	Refractive Index of: Lens; Mirrors	Use whiteboard and display	Daily exam and oral questions
7	2	Knowledge	Coherent Sources, Single Slit, Double Slit, and Their Effect on the Eye	Use whiteboard and display	Daily exam and oral questions
8	2	Knowledge	Solar Energy Technology: Availability of solar radiation; Photovoltaic devices; Dye-sensitized solar cells; Photoelectrochemical cells for hydrogen production	Use whiteboard and display	Daily exam and oral questions
9	2	Knowledge	Nanotechnology in Renewable Energy Systems: Nanotechnology-enabled renewable energy technologies; Energy transport, conversion and storage – nano, micro and meso-	Use whiteboard and display	Daily exam and oral questions

			scale phenomena and devices		
10	2	Knowledge	Energy Sector Products Using Nanomaterials: Light-emitting diodes; Batteries	Use whiteboard and display	Daily exam and oral questions
11	2	Knowledge	Nanomaterials for the Conversion of Carbon Dioxide into Renewable Fuels and Value-Added Products: Theoretical potentials for electrochemical reduction of CO₂; Effect of particle size on electrode performance in electrochemical CO₂ reduction	Use whiteboard and display	Daily exam and oral questions
12	2	Knowledge	Nanotechnology for Hydrogen Production: Photocatalytic water-splitting reaction; Nano-semiconductor materials for photocatalytic water splitting	Use whiteboard and display	Daily exam and oral questions

	4	

13	2	Knowledge	Schematic and Reduced Eye: Gullstrand Schematic Eye; Listing Reduced Eye	Use whiteboard and display	Daily exam and oral questions
14	2	Knowledge	Nanomaterials and Direct Air Capture of CO₂: Capture or separation technologies; New	Use whiteboard and display	Daily exam and oral questions
15			Examination	Use whiteboard and display	Daily exam and oral questions

11. Course Evaluation

5 marks are calculated on reports

5 points are calculated on daily exams

5 degrees are calculated on the daily preparation

And the rest of the grade is for the monthly exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Analytical biostatistics books
Main references (sources)	Curriculum scheduled within the sectoral committees
Recommended books and references (scientific journals, reports...)	1. Fundamentals in Biophysics and Medicine – Page 187. Dr. Marwan bin Ahmed Al-Fahhad and Dr. Abdul-Ghani Yousef Qarm, 2005. Available through Google Books.

	2. Basic Physics: For First-Year University and Technical Colleges. Available through Google Books.
Electronic References, Websites	ncbi,google scholar, reserachgate

Lecturer : Prof. Dr. Majid Hussein Dweij

	6	

نموذج وصف المقرر

**Review the performance of the higher education institution
(review of the academic program)**

وصف المقرر

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

1. Educational Institution	Al-Zahrawi University – College of medical technologies
2. University Department / Center	Department of optics technologies
3. Course Name / Code	Pharmacology
4. Programs in which it is included	Bachelor degree
5. Available Forms of Attendance	Full-time (everyday) attendance
6. Semester / Year	2nd semester/ 2026
7. Total Number of Study Hours	3 hours
8. Date of preparing this description	18-September-2026
9. Course Objectives: Understand the concept of drug action and its various applications.	
10. Learning Outcomes, Teaching and Learning Methods, and Evaluation	

A. Knowledge and Understanding

- 1- Introduce the student to the mechanisms of drug action within the body.**
- 2- Introduce the student to potential drug interactions.**
- 3- Identify the side effects of drugs.**
- 4- Understand the concept of drug kinetics within the body.**

B. Subject-Specific Skills

- 1. Providing the student with knowledge in the field of pharmacology, enabling them to translate this knowledge into action when the situation calls for a specific response to solve a problem.**
- 2. Providing the student with the necessary skills to apply the acquired knowledge to form a fundamental foundation for understanding health phenomena related to optics.**

Teaching and Learning Methods

Lecture, dialogue, discussion, examples, and information available online.

C. Evaluation Methods

Monthly exams, homework and daily student activities (daily preparation and recording of participation for each student).

D. Thinking Skills

- 1- Asking questions during the lecture to engage students and enable them to answer them.**
- 2- Linking the topic of pharmacology and its applications to the environment in which students live, and the possibility of benefiting from them to facilitate life and enjoy scientific and technological achievements.**
- 3- Asking questions and researching the latest developments in pharmacology regarding technical and health applications.**

Teaching and Learning Methods

Lecture, dialogue, discussion, examples, and information available online.

Evaluation Methods

Monthly exams, homework and daily student activities (daily preparation and recording of participation for each student).

e. General and Transferable Skills

- 1- Optimize the use of pharmacological concepts and their application to comprehensive knowledge regarding the interpretation of scientific phenomena.**
- 2- The student's handling of problems related to the interpretation of optical phenomena.**

11. Course Structure					
Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
١	3	Knowledge	Introduction	Board and data show	Quiz and discussion
٢	3	Knowledge	Pharmacokinetic principles	Board and data show	Quiz and discussion
٣	3	Knowledge	Pharmacodynamics principles	Board and data show	Quiz and discussion
٤	3	Knowledge	Antibiotic I	Board and data show	Quiz and discussion
٥	3	Knowledge	Antibiotic II	Board and data show	Quiz and discussion
٦	3	Knowledge	CNS drugs part I	Board and data show	Quiz and discussion
٧	3	Knowledge	CNS drugs part II	Board and data show	Quiz and discussion
٨	3	Knowledge	Cardiovascular drugs part I	Board and data show	Quiz and discussion
٩	3	Knowledge	Cardiovascular drugs part II	Board and data show	Quiz and discussion
١٠	3	Knowledge	Endocrine drugs part I	Board and data show	Quiz and discussion
١١	3	Knowledge	Endocrine drugs part II	Board and data show	Quiz and discussion
١٢	3	Knowledge	Effect of drugs on eye	Board and data show	Quiz and discussion

١٣	3	Knowledge	Anti-inflammatory drugs	Board and data show	Quiz and discussion
١٤	3	Knowledge	GIT drugs	Board and data show	Quiz and discussion

12. Infrastructure	
Required Readings:	References: Lippincott Illustrated Reviews: Pharmacology Eighth edition
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites:
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Organizing workshops and courses for graduates: None.

13.	
Prerequisites	
Minimum Number of Students	30
Maximum Number of Students	110

Name of the Instructor: م.م. حسنين عبد الحميد عذار

Course Description Form

1. Course Name: / أجهزة بصرية ١ نظري
2. Course Code: Opt543102
3. Semester 1 / Year:2 th 202٦/202٧
4. Description Preparation Date:2026
5. Available Attendance Forms: Daily attendance
6. Number of Credit Hours (Total) / Number of Units ٢ Hours (Total) 15 week
7. Course administrator's name (mention all, if more than one name)
Name: علي جاسم عبدالرضا Email: ali198219909@gmail.com
8. Course Objectives

• سيتعرف الطالب على فوائد استخدام الأجهزة وعملها وطريقة الفحص بها • ان يتعرف الطالب على مميزات جميع أنواع الأجهزة وعملها للاستخدام في مجال طب العيون • يتعلم الطالب على الحالات المرضية التي يتم فحصها باستخدام الأجهزة

9. Teaching and Learning Strategies

Strategy	•لقاء المحاضرات •عمل ورش •لقاء ندوات وسمنارات
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
١	٢	الأجهزة البصرية	Introduction and general information	لقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٢	٢	الأجهزة البصرية	General consideration for maintaining ophtha	لقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٣	٢	الأجهزة البصرية	instruments and ophthalmic instruments decontamination	لقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٤	٢	الأجهزة البصرية	Ophthalmic instruments decontamination: (c disinfection,	لقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير

			inspection, packaging, sterilization (transport)	والبصرية	
٥	٢	الأجهزة البصرية	Risk of transmission of infection in devices use Tonometry, diagnostic contact lenses	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٦	٢	الأجهزة البصرية	Risk of transmission of infection in devices use Tonometry, diagnostic contact lenses	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٧	٢	الأجهزة البصرية	Test charts and trial case and frame	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٨	٢	الأجهزة البصرية	Test charts and trial case and frame	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٩	٢	الأجهزة البصرية	Retinoscope	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١٠	٢	الأجهزة البصرية	Auto refractometer	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير

١١	2	الأجهزة البصرية	Auto refractometer	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١٢	2	الأجهزة البصرية	Tonometer types, contact and non-contact	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١٣	2	الأجهزة البصرية	Tonometer types, contact and non-contact	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١٤	2	الأجهزة البصرية	Lensometer	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
15			Examination		

11. Course Evaluation

5 marks are calculated on reports

5 points are calculated on daily exams

5 degrees are calculated on the daily preparation

And the rest of the grade is for the monthly exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	curricular books
Main references (sources)	Curriculum scheduled within t sectoral committees
Electronic References, Websites	ncbi,google scholar,reserachgate

Lecturer : علي جاسم عبدالرضا

Course Description Form

1. Course Name	Squint 4
2. Course Code	
3. Semester / Year	Second Semester / Fourth Year / 2025–2026
4. Description Preparation Date	18 January 2026
5. Available Attendance Forms	Attendance
6. Total Study Hours / Units	2 Hours (Total) 15 week
7. Course Administrator	Dr. Enass Elsharkawy (enas.el.sharkawy2016@gmail.com)
Educational Institution	Al-Zahrawi University; Ministry of Higher Education and Scientific Research
Department	Optical Techniques
Program	Academic

8. Course Objectives

Course objectives and learning outcomes

Course objective: Learn to examine patients and diagnose and evaluate squint.

Knowledge and understanding:

1. Diagnose and evaluate hypertropia.
2. Understand vertical strabismus and cyclodeviations.
3. Know paralytic squint.
4. Understand ocular nerve palsies.

Subject-specific skills: Know vertical strabismus, cyclodeviations and paralytic squint.

Thinking skills: Examine and diagnose cases of squint.

9. Teaching and Learning Strategies

Data-show presentations, lectures and videos (methods specified in the source).

10. Course Structure

Week	Hours	Required learning outcomes	Unit or subject name	Learning method	Evaluation method
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Week	Hours	Required learning outcomes	Unit or subject name	Learning method	Evaluation method
1	6	Know what hypertropia is	Hypertropia: definition and causes	Data-show, videos and scientific lectures	Quiz and reports
2	6	Know how to manage hypertropia	Hypertropia: diagnosis and treatment	Data-show, videos and scientific lectures	Quiz and reports
3	6	Know the causes of vertical strabismus	Vertical strabismus and cyclodeviations: definition and causes	Data-show, videos and scientific lectures	Quiz and reports
4	6	Know management of vertical strabismus and cyclodeviations	Vertical strabismus and cyclodeviations: diagnosis and treatment	Data-show, videos and scientific lectures	Quiz
5	6	Know dissociated vertical deviation and how to diagnose it	Dissociated vertical deviation	Data-show, videos and scientific lectures	Quiz and reports
6	6	Know the causes of fourth nerve palsy	Fourth cranial nerve palsy: definition and causes	Data-show, videos and scientific lectures	Quiz and reports

Week	Hours	Required learning outcomes	Unit or subject name	Learning method	Evaluation method
7	6	Know how to manage fourth nerve palsy	Fourth cranial nerve palsy: diagnosis and treatment	Data-show, videos and scientific lectures	Quiz and reports
8	6	Know the causes of third nerve palsy	Third cranial nerve palsy: definition and causes	Data-show, videos and scientific lectures	Quiz
9	6	Know how to manage third nerve palsy	Third cranial nerve palsy: diagnosis and treatment	Data-show, videos and scientific lectures	Quiz and reports
10	6	Know the causes of facial nerve palsy	Facial nerve palsy: definition and causes	Data-show, videos and scientific lectures	Quiz
11	6	Know how to manage facial nerve palsy	Facial nerve palsy: diagnosis and treatment	Data-show, videos and scientific lectures	Quiz and reports
12	6	Know the examination of exotropia	Exotropia examination	Data-show, videos and scientific lectures	Quiz and reports
13	6	Know the management of exotropia	Exotropia management	Videos and scientific lectures	Quiz and reports

11. Course Evaluation

Daily preparation, quizzes, reports, practical assessment, and oral and written exams.

12. Learning and Teaching Resources

Required readings / references	1. Kanski 2. American Academy of Ophthalmology
Additional references	
Electronic references and websites	PubMed

13. Additional Source Information

Course instructor: Dr. Enass Elsharkawy

Course Description Form

1. Course Name: Biology I
2. Course Code: OPT541204
3. Semester 2 / Year:4 th 2025/2026
4. Description Preparation Date:2026
5. Available Attendance Forms: Daily attendance
6. Number of Credit Hours (Total) / Number of Units 2 Hours (Total) 15 week
7. Course administrator's name (mention all, if more than one name)
Name: Murtadha Hassan
Email: murtaza.hassan@mohesr.gov.iq

8. Course Objectives					
Course Objectives		The course aims to provide students with basic knowledge of molecular biology, microbiology, parasitology, and mycology, with a focus on pathogenic microorganisms associated with eye health and the mechanisms of immune defense against ocular infections.			
9. Teaching and Learning Strategies					
Strategy		Ability to distinguish between different types of microorganisms. .A Use scientific terminology related to microbiology. .B ☐ Interpret Gram staining results and basic laboratory tests. .C			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Knowledge	DNA Replication	Use whiteboard and display	Daily exam and oral questions
2	2	Knowledge	Transcription, Protein Synthesis and Mutation	Use whiteboard and display	Daily exam and oral questions
3	2	Knowledge	Cell Division (Mitosis and Meiosis)	Use whiteboard and display	Daily exam and oral questions
4	2	Knowledge	Mitosis	Use whiteboard and display	Daily exam and oral questions

	2	

5	2	Knowledge	Gametogenesis	Use whiteboard and display	Daily exam and oral questions
6	2	Knowledge	Spermatogenesis and Oogenesis	Use whiteboard and display	Daily exam and oral questions
7	2	Knowledge	Introduction to Bacteria	Use whiteboard and display	Daily exam and oral questions
8	2	Knowledge	Bacterial Staining Techniques	Use whiteboard and display	Daily exam and oral questions
9	2	Knowledge	Culture Media and Nutritional Requirements	Use whiteboard and display	Daily exam and oral questions
10	2	Knowledge	Introduction to Viruses	Use whiteboard and display	Daily exam and oral questions
11	2	Knowledge	Introduction to Parasites	Use whiteboard and display	Daily exam and oral questions
12	2	Knowledge	Introduction to Mycology	Use whiteboard and display	Daily exam and oral questions
13	2	Knowledge	Sterilization and Disinfection	Use whiteboard and display	Daily exam and oral questions
14	2	Knowledge	Host Defense Components of Human Tears	Use whiteboard and display	Daily exam and oral questions
15			Eye Infections	Use whiteboard and display	Daily exam and oral questions

11. Course Evaluation	
5 marks are calculated on reports 5 points are calculated on daily exams 5 degrees are calculated on the daily preparation And the rest of the grade is for the monthly exams	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Analytical biostatistics books
Main references (sources)	Curriculum scheduled within t sectoral committees
Recommended books and references (scientific journals, reports...)	Campbell Biology. .a Biology – OpenStax. .b Molecular Biology of the .c Cell. Essential Biology. .B
Electronic References, Websites	ncbi,google scholar,reserachgate

Lecturer : **Murtadha Hassan**

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Course Description Form

1. Course Name: / البدائل العينية ١ نظري
2. Course Code: Opt
3. Semester 1 / Year:4 th 202٦/202٧
4. Description Preparation Date:2026
5. Available Attendance Forms: Daily attendance
6. Number of Credit Hours (Total) / Number of Units ٧ Hours (Total) 15 week
7. Course administrator's name (mention all, if more than one name)
Name: علي جاسم عبدالرضا Email: ali198219909@gmail.com
8. Course Objectives

	• التعرف على أنواع البدائل العينية والمواد المستخدمة وكيفية تصنيعها وعملها • تعلم الطالب كيف يصنع البدائل العينية والمواد المستخدمة فيها والتعرف على الأجهزة المستخدمة في تصنيعها • يتعلم الطالب على الحالات المرضية التي تحتاج البدائل العينية
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9. Teaching and Learning Strategies

Strategy	•لقاء المحاضرات • عمل ورش • لقاء ندوات وسمنارات
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
١	٢	البدائل العينية	Anatomy of the eye.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٢	٢	البدائل العينية	Introduction to the ocular prosthesis.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٣	٢	البدائل العينية	Types of ocular prosthesis (advantages and disadvantages)	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٤	٢	البدائل العينية	Causes of the eye damage and facial damage	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير

٥	٢	البدائل العينية	Types of eye damage	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
٦	٢	البدائل العينية	Materials used for ocular and orbital prosthesis	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
٧	٢	البدائل العينية	Instruments and devices used for ocular prosthesis	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
٨	٢	البدائل العينية	Patient assessment for ocular prosthesis and orbital prosthesis.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
٩	٢	البدائل العينية	Impression materials for ocular and orbital prosthesis.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
١٠	٢	البدائل العينية	Impression of the eye defect.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
١١	2	البدائل العينية	Types of wax pattern ocular prosthesis.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير

١٢	2	البدائل العينية	Wax pattern the ocular defect.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
١٣	2	البدائل العينية	Try an anterior and posterior wax pattern on the patient and make the necessary adjustments.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
١٤	2	البدائل العينية	How to make a patient's artificial eye from the pattern.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
15			Examination		

11. Course Evaluation

5 marks are calculated on reports
5 points are calculated on daily exams
5 degrees are calculated on the daily preparation
And the rest of the grade is for the monthly exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	curricular books
Main references (sources)	Curriculum scheduled within t sectoral committees
Electronic References, Websites	ncbi,google scholar,reserachgate

Lecturer : علي جاسم عبدالرضا

Course Description Form

1. Course Name: Pharmacology (theoretical)	
2. Course Code: OPT542206	
3. Semester 2 / Year:2 th 2025/2026	
4. Description Preparation Date:2026	
5. Available Attendance Forms: Daily attendance	
6. Number of Credit Hours (Total) / Number of Units 2 Hours (Total) 15 week	
7. Course administrator's name (mention all, if more than one name)	
Name: Hasanain A Odhar Email: hodhar3@gmail.com	
8. Course Objectives	
Course Objectives	1- Introduce the student to the mechanisms of drug action within the

	1	

	body. 2- Introduce the student to potential drug interactions. 3- Identify the side effects of drugs. 4- Understand the concept of drug kinetics within the body.
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9. Teaching and Learning Strategies

Strategy	1. Education Strategy Collaborative Concept Planning 2- Brainstorming education strategy. 3. Education Strategy Notes Series 4- Presentation, training, discussion research and reports
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Knowledge	Introduction	Use whiteboard and display	Daily exam and oral questions
2	2	Knowledge	Pharmacokinetic principles	Use whiteboard and display	Daily exam and oral questions
3	2		Pharmacodynamics principles	Use whiteboard	Daily exam and

	2	

		Knowledge		and display	oral questions
4	2	Knowledge	Antibiotics	Use whiteboard and display	Daily exam and oral questions
5	2	Knowledge	CNS drugs part I	Use whiteboard and display	Daily exam and oral questions
6	2	Knowledge	CNS drugs part II	Use whiteboard and display	Daily exam and oral questions
7	2	Knowledge	Cardiovascular drugs part I	Use whiteboard and display	Daily exam and oral questions
8	2	Knowledge	Cardiovascular drugs part II	Use whiteboard and display	Daily exam and oral questions
9	2	Knowledge	Endocrine drugs part I	Use whiteboard and display	Daily exam and oral questions
10	2	Knowledge	Endocrine drugs part II	Use whiteboard and display	Daily exam and oral questions
11	2	Knowledge	Effect of drugs on eye	Use whiteboard and display	Daily exam and oral questions
12	2	Knowledge	Anti-inflammatory drugs	Use whiteboard and display	Daily exam and oral questions
13	2	Knowledge	GIT drugs	Use whiteboard and display	Daily exam and oral questions
14	2	Knowledge	Anticancer drugs	Use whiteboard	Daily exam and oral questions

	3	

				and display	
15	2	Knowledge	Immunosuppressant drugs	Use whiteboard and display	Daily exam and oral questions

11. Course Evaluation

5 marks are calculated on reports

5 points are calculated on daily exams

5 degrees are calculated on the daily preparation

And the rest of the grade is for the monthly exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Analytical biostatistics books
Main references (sources)	Curriculum scheduled within the sectoral committees
Recommended books and references (scientific journals, reports...)	Lippincott Illustrated Reviews Pharmacology Eighth edition
Electronic References, Websites	ncbi, google scholar, researchgate

Lecturer : Hasanain A odhar

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Course Description Form

1. Course Name: squint 1 (theoretical)	
2. Course Code: OPT543105	
3. Semester 1 / Year:3rd 2025/2026	
4. Description Preparation Date:2026	
5. Available Attendance Forms: Daily attendance	
6. Number of Credit Hours (Total) / Number of Units 2 Hours (Total) 15 week	
7. Course administrator's name	
Name: Enass ELsharkawy Ali Email: enas.el.sharkawy2016@gmail.com	
8. Course Objectives	
Course Objectives	Knowledge and Understanding 1.Anatomy and physiology of extraocular muscle 2.Types of squint 3.Single binocular vision

9. Teaching and Learning Strategies					
Strategy		1. Education Strategy Collaborative Concept Planning 2- Brainstorming education strategy. 3. Education Strategy Notes Series 4- Presentation, training, discussion research and reports			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Knowledge	Anatomy and physiology of extraocular muscle	Use whiteboard and display	Daily exam and oral questions
2	2	Knowledge	Types of eye movement	Use whiteboard and display	Daily exam and oral questions
3	2	Knowledge	Single binocular vision	Use whiteboard and display	Daily exam and oral questions
4	2	Knowledge	Introduction to types of squint	Use whiteboard and display	Daily exam and oral questions
5	2	Knowledge	Apparent squint.	Use whiteboard and display	Daily exam and oral questions
6	2	Knowledge	Latent squint (definition, causes)	Use whiteboard and display	Daily exam and oral questions

	2	

7	2	Knowledge	Latent squint (diagnosis and treatment)	Use whiteboard and display	Daily exam and oral questions
8	2	Knowledge	manifest squint (definition and causes)	Use whiteboard and display	Daily exam and oral questions
9	2	Knowledge	Pseudoesotropia (definition ,causes evaluation and treatment)	Use whiteboard and display	Daily exam and oral questions
10	2	Knowledge	Esophoria(definition ,causes and treatment)	Use whiteboard and display	Daily exam and oral questions
11	2	Knowledge	Esotropia (definition ,causes evaluation and treatment)	Use whiteboard and display	Daily exam and oral questions
12	2	Knowledge	Accommodative esotropia(definition ,causes evaluation and treatment)	Use whiteboard and display	Daily exam and oral questions
13	2	Knowledge	Refractive accommodative esotropia(definition ,causes)	Use whiteboard and display	Daily exam and oral questions
14	2	Knowledge	Refractive accommodative esotropia(evaluation and treatment)	Use whiteboard and display	Daily exam and oral questions
15			Revision	Use whiteboard and display	Daily exam and oral questions
11. Course Evaluation					

5 marks are calculated on reports 5 points are calculated on daily exams 5 degrees are calculated on the daily preparation And the rest of the grade is for the monthly exams	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	1.Kanski 2.American academy of ophthalmology
Main references (sources)	1.Kanski 2.American academy of ophthalmology
Electronic References, Websites	Electronic Websites Pub med

Dr : Enass Esharkawy Ali

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Course Description Form

1. Course Name: Glasses and Contact Lenses 2	
2. Course Code:	
3. Semester 2 / Year: Second Semester – Academic Year 2025/2026	
4. Description Preparation Date:2026	
5. Available Attendance Forms: Daily attendance	
6. Number of Credit Hours (Total) / Number of Units 2 Hours (Total) 15 week	
7. Course administrator's name (mention all, if more than one name)	
Name: dr. ridha mohammed zaki Email: reda.mohammed@alzahu.edu.iq	
8. Course Objectives	
Course Objectives	? General Objective: To enable students to order and prepare medical frames

	using required measurements. 🔗 Specific Objectives: • To learn about different types of frames, medical lenses, and contact lenses. • To practice handling and maintaining all types of glasses and lenses. • To understand risks, complications, and edema associated with contact lenses.
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9. Teaching and Learning Strategies

Strategy	1. Education Strategy Collaborative Concept Planning 2- Brainstorming education strategy. 3. Education Strategy Notes Series 4- Presentation, training, discussion research and reports
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Knowledge	Sport spectacles with prescription.	Use whiteboard and display	Daily exam and oral questions
2	2		Glossary of contact lens	Use whiteboard	Daily exam and oral questions

	2	

		Knowledge	terms.	and displa	
3	2	Knowledge	Types of contact lenses and hard contact lenses.	Use whiteboard and displa	Daily exam and oral questi ons
4	2	Knowledge	Contact lens materials.	Use whiteboard and displa	Daily exam and oral questi ons
5	2	Knowledge	Principles of testing and measurements of CL.	Use whiteboard and displa	Daily exam and oral questi ons
6	2	Knowledge	Fitting, maintenance, and stages for CL.	Use whiteboard and displa	Daily exam and oral questi ons
7	2	Knowledge	Care of contact lenses.	Use whiteboard and displa	Daily exam and oral questi ons
8	2	Knowledge	Soft contact lenses (advantages).	Use whiteboard and displa	Daily exam and oral questi ons
9	2	Knowledge	Disadvantages and cosmetic design of soft CL.	Use whiteboard and displa	Daily exam and oral questi ons
10	2	Knowledge	Follow-up post fitting examination.	Use whiteboard and displa	Daily exam and oral questi ons
11	2	Knowledge	Prescription of hard contact lenses and spectacles.	Use whiteboard and displa	Daily exam and oral questi ons
12	2	Knowledge	Risks, complications, and edema of different	Use whiteboard and displa	Daily exam and oral questi ons

			CL.		
13	2	Knowledge	Continuation of risks and complications.	Use whiteboard and display	Daily exam and oral questions
14	2	Knowledge	Keratometer.	Use whiteboard and display	Daily exam and oral questions
15			Revision	Use whiteboard and display	Daily exam and oral questions

11. Course Evaluation

5 marks are calculated on reports
 5 points are calculated on daily exams
 5 degrees are calculated on the daily preparation
 And the rest of the grade is for the monthly exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Lecturer : dr. ridha mohammed zaki

**Review the performance of the higher education institution
(review of the academic program)**

وصف المقرر

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

1. Educational Institution	Al-Zahrawi University – College of medical technologies
2. University Department / Center	Department of optics technologies
3. Course Name / Code	Statistical applications II
4. Programs in which it is included	Bachelor degree
5. Available Forms of Attendance	Full-time (everyday) attendance
6. Semester / Year	2nd semesters/ 2026
7. Total Number of Study Hours	Theory: 1hr+ Practical: 3 hrs
8. Date of preparing this description	18-September-2026
9. Course Objectives: Learn about statistical applications, as well as medical surveys and their procedures.	
10. Learning Outcomes, Teaching and Learning Methods, and Evaluation	

A. Knowledge and Understanding

- 1- Introducing the student to the importance of biology in scientific research.**
- 2- How to prepare a medical survey plan.**
- 3- Learning how to take statistical samples.**
- 4-How to analyze and present statistical study data.**

B. Subject-Specific Skills

- 1. Providing the student with knowledge in the field of medical statistics, enabling them to translate this knowledge into action when the situation calls for a specific response to solve a problem.**
- 2. Providing the student with the necessary skills to apply the acquired knowledge to form a fundamental foundation for understanding health phenomena related to optics.**

Teaching and Learning Methods

Lecture, dialogue, discussion, examples, practical lab, and online information.

C. Evaluation Methods

Monthly exams, homework and daily student activities (daily preparation and recording of participation for each student).

D. Thinking Skills

- 1- Asking questions during the lecture, with the aim of engaging students and enabling them to answer them.**
- 2- Linking the topic of medical statistics and its applications to what happens in the environment in which students live, and the possibility of benefiting from them to facilitate life and enjoy scientific and technological achievements.**
- 3- Asking questions and researching the latest developments in medical statistics regarding technical and health applications.**

Teaching and Learning Methods

Lecture, dialogue, discussion, examples, practical lab, and online information.

Evaluation Methods

Monthly exams, homework and daily student activities (daily preparation and recording of participation for each student).

e. General and Transferable Skills

- 1- Optimal use of concepts related to medical statistics and their application to comprehensive knowledge regarding the interpretation of scientific phenomena.**
- 2- Student's handling of problems related to the interpretation of visual phenomena.**
- 3- Optimal use of statistical programs and how to interpret results.**

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11. Course Structure					
Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
١	Theory:1 hr Practice: 3 hrs	Knowledge	Probability and distribution	Board and data show	Quiz And discussion
٢	Theory:1 hr Practice: 3 hrs	Knowledge	Correlation	Board and data show	Quiz And discussion
٣	Theory:1 hr Practice: 3 hrs	Knowledge	Regression	Board and data show	Quiz And discussion
٤	Theory:1 hr Practice: 3 hrs	Knowledge	Hypothesis testing part I	Board and data show	Quiz And discussion
٥	Theory:1 hr Practice: 3 hrs	Knowledge	Hypothesis testing part II	Board and data show	Quiz And discussion
٦	Theory:1 hr Practice: 3 hrs	Knowledge	Parametric vs non-parametric testing	Board and data show	Quiz And discussion
٧	Theory:1 hr Practice: 3 hrs	Knowledge	t-test analysis	Board and data show	Quiz And discussion
٨	Theory:1 hr Practice: 3 hrs	Knowledge	Mann-Whitney U test	Board and data show	Quiz And discussion
Mid-term exam					
٩	Theory:1 hr Practice: 3 hrs	Knowledge	Wilcoxon signed rank test	Board and data show	Quiz And discussion
١٠	Theory:1 hr Practice: 3 hrs	Knowledge	ANOVA	Board and data show	Quiz And discussion
١١	Theory:1 hr Practice: 3 hrs	Knowledge	Chi-square test	Board and data show	Quiz And discussion

١٢	Theory:1 hr Practice: 3 hrs	Knowledge	Sensitivity and specificity	Board and data show	Quiz And discussion
١٣	Theory:1 hr Practice: 3 hrs	Knowledge	Review	Board and data show	Quiz And discussion
Final exam					

12. Infrastructure	
Required Readings:	References: Biostatistics: A foundation for the analysis in health science 10 th edition
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites:
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Organizing workshops and courses for graduates:

13.	
Prerequisites	
Minimum Number of Students	30
Maximum Number of Students	110

Name of the Instructor: م.م. حسنين عبد الحميد

Course Description Form

1. Course Name	Squint 3
2. Course Code	
3. Semester / Year	First Semester / Fourth Year / 2025–2026
4. Description Preparation Date	18 January 2026
5. Available Attendance Forms	Attendance
6. Total Study Hours / Units	2 hours weekly
7. Course Administrator	Dr. Enass Elsharkawy
Educational Institution	Al-Zahrawi University; Ministry of Higher Education and Scientific Research
Department	Optical Techniques
Program	Academic

8. Course Objectives

Course objectives and learning outcomes

: Learn how to examine patients and diagnose and evaluate squint.

Knowledge and understanding:

1. Diagnose and evaluate heterophoria.
2. Understand the grades of binocular vision.
3. Know the synoptophore and its uses.
4. Understand diplopia and the Hess chart.

Subject-specific skills: Know the synoptophore and its uses; understand diplopia and the Hess chart.

Thinking skills: Examine and diagnose cases of squint.

9. Teaching and Learning Strategies

Data-show presentations, scientific lectures and videos (as specified in the source).

10. Course Structure

Week	Hours	Required learning outcomes	Unit or subject name	Learning method	Evaluation method

Week	Hours	Required learning outcomes	Unit or subject name	Learning method	Evaluation method
1	6	Know what a synoptophore is and when it is used	Synoptophore: definition, parts and uses	Data-show, videos and scientific lectures	Quiz and reports
2	6	Know the grades of binocular vision	Grades of binocular vision	Data-show, videos and scientific lectures	Quiz and reports
3	6	Know how to perform a convergence test	Convergence test	Data-show, videos and scientific lectures	Quiz and reports
4	6	Not specified in the source	Heterophoria: definition, symptoms and evaluation	Data-show, videos and scientific lectures	Quiz
5	6	Know factors causing decompensating heterophoria	Factors causing decompensating heterophoria	Data-show, videos and scientific lectures	Quiz and reports
6	6	Know the treatment of heterophoria	Treatment of heterophoria	Data-show, videos and scientific lectures	Quiz and reports
7	6	Know orthoptic exercises in amblyopia	Orthoptic exercises in amblyopia	Data-show, videos and scientific lectures	Quiz and reports

Week	Hours	Required learning outcomes	Unit or subject name	Learning method	Evaluation method
8	6	Know active amblyopia therapy	Active amblyopia therapy	Data-show, videos and scientific lectures	Quiz
9	6	Know orthoptic exercises for convergence excess and insufficiency	Orthoptic exercises in convergence excess and convergence insufficiency	Data-show, videos and scientific lectures	Quiz and reports
10	6	Know computer vision therapy	Computer vision therapy	Data-show, videos and scientific lectures	Quiz
11	6	Know the definition and types of diplopia	Diplopia: definition and types	Data-show, videos and scientific lectures	Quiz and reports
12	6	Know diplopia examination and the Hess chart	Diplopia: examination and Hess chart	Data-show, videos and scientific lectures	Quiz and reports
13	6	Know how to interpret the Hess chart in diplopia	Diplopia: interpretation of the Hess chart	Videos and scientific lectures	Quiz and reports
14	6	Not specified in the source	Diplopia: temporary optical treatment	Videos and scientific lectures	Quiz and reports

11. Course Evaluation

Daily preparation, quizzes, reports, practical assessment, and oral and written exams. The source does not state assessment weights or a total mark.

12. Learning and Teaching Resources

Required readings / references	1. Kanski 2. American Academy of Ophthalmology
Additional references	1. Kanski 2. American Academy of Ophthalmology
Electronic references and websites	PubMed

13. Additional Source Information

Graduate workshops and training: Hess chart training and use of the synoptophore. Prerequisites and.

Course instructor: Dr. Enass Elsharkawy

Course Description Form

1. Course Name: Biology	
2. Course Code: 541104OPT	
3. Semester 2 / Year:4 th 2025/2026	
4. Description Preparation Date:2026	
5. Available Attendance Forms: Daily attendance	
6. Number of Credit Hours (Total) / Number of Units 2 Hours (Total) 15 week	
7. Course administrator's name (mention all, if more than one name)	
Name: Murtadha Hassan Email: murtaza.hassan@moheer.gov.iq	
8. Course Objectives	
Course Objectives	The course aims to provide students with basic knowledge of biology, an understanding of the fundamental principles and

	concepts of life, an introduction to cell structure and functions, the types and classification of living organisms, and the basic biological processes occurring in living organisms. This contributes to building a basic scientific foundation that supports students in studying medical sciences and health and medical technologies.
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9. Teaching and Learning Strategies

Strategy	Recognize the basic principles and general concepts of biology. .1 Understand the characteristics of living organisms and levels of biological organization. .2 Recognize basic elements, compounds, and biomolecules. .3 Understand cell structure and the functions of its different components. .4
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Knowledge	Introduction to Biology	Use whiteboard and display	Daily exam and oral questions
2	2	Knowledge	Chemical Basis of Life	Use whiteboard and display	Daily exam and oral questions

	2	

3	2	Knowledge	Biological Molecules	Use whiteboard and display	Daily exam and oral questions
4	2	Knowledge	Cell Structure and Function	Use whiteboard and display	Daily exam and oral questions
5	2	Knowledge	Prokaryotic and Eukaryotic Cells	Use whiteboard and display	Daily exam and oral questions
6	2	Knowledge	Cell Membrane and Transport.	Use whiteboard and display	Daily exam and oral questions
7	2	Knowledge	Cell Cycle and Mitosis	Use whiteboard and display	Daily exam and oral questions
8	2	Knowledge	Meiosis.	Use whiteboard and display	Daily exam and oral questions
9	2	Knowledge	Tissues	Use whiteboard and display	Daily exam and oral questions
10	2	Knowledge	Genetics	Use whiteboard and display	Daily exam and oral questions
11	2	Knowledge	DNA and RNA	Use whiteboard and display	Daily exam and oral questions
12	2	Knowledge	Protein Synthesis	Use whiteboard and display	Daily exam and oral questions
13	2	Knowledge	Classification of Living Organisms	Use whiteboard and display	Daily exam and oral questions

14	2	Knowledge	Ecology	Use whiteboard and display	Daily exam and oral questions
15			Examination	Use whiteboard and display	Daily exam and oral questions

11. Course Evaluation

5 marks are calculated on reports
5 points are calculated on daily exams
5 degrees are calculated on the daily preparation
And the rest of the grade is for the monthly exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Analytical biostatistics books
Main references (sources)	Curriculum scheduled within the sectoral committees
Recommended books and references (scientific journals, reports...)	• Campbell Biology • Biology – OpenStax • Molecular Biology of the Cell • Essential Biology
Electronic References, Websites	ncbi, google scholar, researchgate

Lecturer : **Murtadha Hassan**

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Course Description Form

1. Course Name	Squint 2 (Theoretical)
2. Course Code	OPT543205
3. Semester / Year	Semester 2 / Third Year / 2025-2026
4. Description Preparation Date	2026
5. Available Attendance Forms	Daily attendance
6. Credit Hours (Total) / Units	2 hours per week over 15 weeks
7. Course Administrator	Enass ELsharkawy Ali Email: enas.el.sharkawy2016@gmail.com

8. Course Objectives

Knowledge and Understanding

1. Acute acquired comitant esotropia.
2. Surgical principles to manage esotropia.
3. Exophoria.
4. Exotropia.

9. Teaching and Learning Strategies

1. Collaborative concept-planning strategy.
2. Brainstorming strategy.
3. Notes-series strategy.
4. Presentation, training, discussion, research, and reports.

10. Course Structure

Week	Hours	Required learning outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Knowledge	Acute acquired comitant esotropia: definition and causes	Whiteboard and display	Daily exam and oral questions
2	2	Knowledge	Acute acquired comitant esotropia: evaluation and treatment	Whiteboard and display	Daily exam and oral questions
3	2	Knowledge	Surgical principles of esotropia	Whiteboard and display	Daily exam and oral questions
4	2	Knowledge	Exophoria: definition, causes and management	Whiteboard and display	Daily exam and oral questions

Week	Hours	Required learning outcomes	Unit or subject name	Learning method	Evaluation method
5	2	Knowledge	Intermittent exotropia	Whiteboard and display	Daily exam and oral questions
6	2	Knowledge	Infantile exotropia: definition, causes and management	Whiteboard and display	Daily exam and oral questions
7	2	Knowledge	Sensory exotropia: definition and causes	Whiteboard and display	Daily exam and oral questions
8	2	Knowledge	Sensory exotropia: evaluation and treatment	Whiteboard and display	Daily exam and oral questions
9	2	Knowledge	Surgical principles of exotropia	Whiteboard and display	Daily exam and oral questions
10	2	Knowledge	Paralytic squint: definition and causes	Whiteboard and display	Daily exam and oral questions
11	2	Knowledge	Paralytic squint: evaluation and treatment	Whiteboard and display	Daily exam and oral questions
12	2	Knowledge	Hypertropia: definition and causes	Whiteboard and display	Daily exam and oral questions
13	2	Knowledge	Hypertropia: evaluation and treatment	Whiteboard and display	Daily exam and oral questions
14	2	Knowledge	Types of esotropia	Whiteboard and display	Daily exam and oral questions
15	—		Revision	Whiteboard and display	Daily exam and oral questions

11. Course Evaluation

5 marks for reports; 5 marks for daily exams; 5 marks for daily preparation. The remaining marks are allocated to monthly exams. The source does not specify an overall total or a separate attendance mark.

12. Learning and Teaching Resources

Required textbooks (if any)	1. Kanski 2. American Academy of Ophthalmology
Main references (sources)	1. Kanski 2. American Academy of Ophthalmology
Electronic references and websites	PubMed

Course administrator: Dr. Enass Esharkawy Ali

Course Description Form

1. Course Name: / أجهزة بصرية ٣ نظري
2. Course Code: Opt543102
3. Semester 1 / Year:3 th 202٦/202٧
4. Description Preparation Date:2026
5. Available Attendance Forms: Daily attendance
6. Number of Credit Hours (Total) / Number of Units ٢ Hours (Total) 15 week
7. Course administrator's name (mention all, if more than one name)
Name: علي جاسم عبدالرضا Email: ali198219909@gmail.com
8. Course Objectives

- سيتعرف الطالب على فوائد استخدام الأجهزة وعملها وطريقة الفحص بها - ان يتعرف الطالب على مميزات جميع أنواع الأجهزة وعملها للاستخدام في مجال طب العيون - يتعلم الطالب على الحالات المرضية التي يتم فحصها باستخدام الأجهزة

9. Teaching and Learning Strategies

Strategy	- القاء المحاضرات - عمل ورش - القاء ندوات وسمنارات
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
١	٢	الأجهزة البصرية	Colour vision test: Ishihara, hardy –Rand- Ritter.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٢	٢	الأجهزة البصرية	Colour vision test: city university, farn sworth-munsell 100 hve-	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٣	٢	الأجهزة البصرية	Contract sensitivity, The Peli-roboson contrast sensitivity letter	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٤	٢	الأجهزة البصرية	Amsler grid .	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٥	٢	الأجهزة البصرية	Dark adaptometry: definition, indication, Gold Mann-weeks adaptometry.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير

٦	٢	الأجهزة البصرية	Dark adaptometry: sensitivity curve, cone branch, rod branch break, rod branch.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٧	٢	الأجهزة البصرية	Orthoptic examination instruments, haloscope, home devices.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٨	٢	الأجهزة البصرية	Bagolini striated glasses.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٩	٢	الأجهزة البصرية	Synaptophore	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١٠	٢	الأجهزة البصرية	Synaptophore	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١١	٢	الأجهزة البصرية	Maddox wing , Maddox rod	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١٢	٢	الأجهزة البصرية	Exophthalmometer	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١٣	٢	الأجهزة البصرية	Perimeter manual and automated.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١٤	٢	الأجهزة البصرية	Perimeter manual and automated.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير

15			Examination		
11. Course Evaluation					
5 marks are calculated on reports					
5 points are calculated on daily exams					
5 degrees are calculated on the daily preparation					
And the rest of the grade is for the monthly exams					
12. Learning and Teaching Resources					
Required textbooks (curricular books, if any)			curricular books		
Main references (sources)			Curriculum scheduled within t sectoral committees		
Electronic References, Websites			ncbi,google scholar,reserachgate		

Lecturer : علي جاسم عبدالرضا

	5	

Course Description Form

1. Course Name: Head and Neck Anatomy	
2. Course Code: OPT541201	
3. Semester 2 / Year:4 th 2025/2026	
4. Description Preparation Date:2026	
5. Available Attendance Forms: Daily attendance	
6. Number of Credit Hours (Total) / Number of Units 2 Hours (Total) 15 week	
7. Course administrator's name (mention all, if more than one name)	
Name: Assistant Lecturer Murtadha Hassan Farhan	
Email: murtaza.hassan@mohe.sr.gov.iq	
8.Course Objectives	
Course Objectives	The course aims to provide students with basic knowledge of the structure and anatomy of the head and neck, to understand the

	anatomical relationships between different organs and tissues, and to recognize their clinical importance in the field of Optics Technology and related medical sciences.
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8. Teaching and Learning Strategies

Strategy	1. Education Strategy Collaborative Concept Planning 2- Brainstorming education strategy. 3. Education Strategy Notes Series 4- Presentation, training, discussion research and reports
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9. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Knowledge	Anatomy of Eye	Use whiteboard and display	Daily exam and oral questions
2	2	Knowledge	Lacrimal Apparatus	Use whiteboard and display	Daily exam and oral questions
3	2	Knowledge	The Orbit	Use whiteboard and display	Daily exam and oral questions
4	2	Knowledge	Muscles of the Orbit	Use whiteboard and display	Daily exam and oral questions

	2	

5	2	Knowledge	Nerves of the Orbit	Use whiteboard and display	Daily exam and oral questions
6	2	Knowledge	Layers of the Eye	Use whiteboard and display	Daily exam and oral questions
7	2	Knowledge	Cornea	Use whiteboard and display	Daily exam and oral questions
8	2	Knowledge	Anterior Chamber	Use whiteboard and display	Daily exam and oral questions
9	2	Knowledge	Uveal Tract	Use whiteboard and display	Daily exam and oral questions
10	2	Knowledge	Ciliary Body	Use whiteboard and display	Daily exam and oral questions
11	2	Knowledge	Ciliary Body	Use whiteboard and display	Daily exam and oral questions
12	2	Knowledge	Lens	Use whiteboard and display	Daily exam and oral questions
13	2	Knowledge	Retina	Use whiteboard and display	Daily exam and oral questions
14	2	Knowledge	Blood and Nerve Supply	Use whiteboard and display	Daily exam and oral questions
15			Examination	Use whiteboard and display	Daily exam and oral questions

10. Course Evaluation	
5 marks are calculated on reports 5 points are calculated on daily exams 5 degrees are calculated on the daily preparation And the rest of the grade is for the monthly exams	
11. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Analytical biostatistics books
Main references (sources)	Curriculum scheduled within t sectoral committees
Recommended books and references (scientific journals, reports...)	<i>Snell's Clinical Anatomy of the Eye.</i> .1 <i>Adler's Physiology of the Eye.</i> .2 <i>Clinical Anatomy by Regions.</i> .3 ? <i>Kanski's Clinical Ophthalmology –</i> .4 relevant sections on anatomy.
Electronic References, Websites	ncbi,google scholar,reserachgate

Lecturer : Murtadha Hassan Farhan

	4	

	5	

Course Description Form

1. Course Name: / البدائل العينية ١ عملي
2. Course Code: Opt
3. Semester 1 / Year:4 th 202٦/202٧
4. Description Preparation Date:2026
5. Available Attendance Forms: Daily attendance
6. Number of Credit Hours (Total) / Number of Units ٤Hours (Total) 15 week
7. Course administrator's name (mention all, if more than one name)
Name: علي جاسم عبدالرضا Email: ali198219909@gmail.com
8. Course Objectives

	• التعرف على أنواع البدائل العينية والمواد المستخدمة وكيفية تصنيعها وعملها • تعلم الطالب كيف يصنع البدائل العينية والمواد المستخدمة فيها والتعرف على الأجهزة المستخدمة في تصنيعها • يتعلم الطالب على الحالات المرضية التي تحتاج البدائل العينية
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9. Teaching and Learning Strategies

Strategy	•لقاء المحاضرات • عمل ورش •لقاء ندوات وسمنارات
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
١	٤	البدائل العينية	Anatomy of the eye.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٢	٤	البدائل العينية	Introduction to the ocular prosthesis.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٣	٤	البدائل العينية	Types of ocular prosthesis (advantages and disadvantages)	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٤	٤	البدائل العينية	Causes of the eye damage and facial damage	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير

٥	٤	البدائل العينية	Types of eye damage	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٦	٤	البدائل العينية	Materials used for ocular and orbital prosthesis	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٧	٤	البدائل العينية	Instruments and devices used for ocular prosthesis	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٨	٤	البدائل العينية	Patient assessment for ocular prosthesis and orbital prosthesis.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
٩	٤	البدائل العينية	Impression materials for ocular and orbital prosthesis.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١٠	٤	البدائل العينية	Impression of the eye defect.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير
١١	٤	البدائل العينية	Types of wax pattern ocular prosthesis.	اللقاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعابير الوجه دراسات وتقارير

١٢	٤	البدائل العينية	Wax pattern the ocular defect.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
١٣	٤	البدائل العينية	Try an anterior and posterior wax pattern on the patient and make the necessary adjustments.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
١٤	٤	البدائل العينية	How to make a patient's artificial eye from the pattern.	القاء المحاضرات التقارير والدراسات استخدم وسائل السمعية والبصرية	الامتحانات بأنواعها ملاحظات الطلاب تعبير الوجه دراسات وتقارير
15			Examination		

11. Course Evaluation

5 marks are calculated on reports
5 points are calculated on daily exams
5 degrees are calculated on the daily preparation
And the rest of the grade is for the monthly exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	curricular books
Main references (sources)	Curriculum scheduled within t sectoral committees
Electronic References, Websites	ncbi,google scholar,reserachgate

Lecturer : علي جاسم عبدالرضا

Republic of Iraq
Ministry of Higher Education & Scientific Research
Supervision and Scientific Evaluation Directorate
Quality Assurance and Academic Accreditation
International Accreditation Dept.

Academic Program Specification Form For The Academic Year 2026-2025

University: AL-Zahrawi University
College: College of Health and Medical Technologies
Number Of Departments In The College:
Date Of Form Completion: 2026/9/20


Prof. Dr. Majeed H.
Dean of the department
Date: 20/9/2025
Signature

Dean's Assistant For
Scientific Affairs

Date: 20 / 9 / 2025
Signature

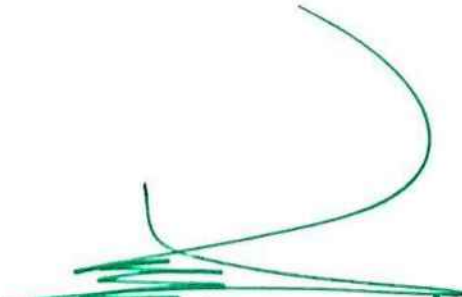
The College Quality Assurance
And University Performance
Manager

Date: 20 / 9 / 2025
Signature


A.L. Sinan Forat H. al-...

Quality Assurance And University Performance Manager

Date: 20 / 9 / 2025
Signature


Dean's Name Prof. Dr. Heba A. Al Salameh

Date: 20 / 9 / 2025

Signature

ACADEMIC PROGRAM AND COURSE DESCRIPTION

Department of Optics Technologies

Al-Zahrawi University College
Department of Optics Technologies

2025

1. Program Vision

The Department of Optics Technologies seeks to occupy a distinguished scientific position in the academic and scientific community and to play an effective and influential applied role in the field, meeting the needs of society and the requirements of the labor market. The department has a scientific staff and appropriate capacity and works toward achieving its vision.

2. Program Mission

The department aims to prepare trained and qualified cadres in the field of optics technologies, including eye examination and diagnosis of eye diseases, manufacture of spectacles and contact lenses, and the use of medical devices employed in examination and diagnosis. Graduates are prepared according to internationally recognized quality and academic accreditation standards, with the ability to analyze and diagnose optical problems in accordance with applicable standards.

3. Program Objectives

- Provide competent and qualified technical personnel in the field of eye examination and specialized areas to meet the country's needs and the requirements of medical and economic development, and to support teaching staff in universities and institutes.
- Continuously update curricula and study plans to keep pace with the latest developments in the field of eye examination and related technologies.
- Keep pace with rapid developments in information technology.
- Focus on scientific research and its essential role in serving society through applied research and research projects.
- Cooperate with relevant public-sector institutions to organize training courses that develop the capabilities of our medical and technical staff.
- Work diligently toward achieving comprehensive quality assurance.
- Encourage scientific cooperation with Arab and international universities and peer institutions and seek to exchange expertise in order to develop the department and advance the educational process.

4. Program Accreditation

No cohort has graduated yet.

5. Other External Influences

Program sponsor: Ministry of Higher Education and Scientific Research.

6. Program Structure

Institutional requirements, department requirements, and summer training are included in the program structure. The department requirements comprise 56 courses/units as shown in the original program structure.

7. Program Description

First Stage / First Semester

Academic Year	Course Code	Course Name	Theory	Practical	Credits
2024/2025	OPTS41102	Principles of Chemistry	2	4	3
2024/2025	OPTS41103	Medical Physics	2	3	5
2024/2025	OPTS41101	Anatomy	2	–	5
2024/2025	OPTS41107	English Language	2	–	2
2024/2025	OPTS41105	Computer Principles 1	2	–	2
2024/2025	OPTS41106	Human Rights	2	–	2
2024/2025	OPTS41104	Biology	2	–	2

First Stage / Second Semester

Academic Year	Course Code	Course Name	Theory	Practical	Credits
2024/2025	OPTS41202	Principles of Biochemistry 2	2	4	3
2024/2025	OPTS41203	Medical Physics 2	2	1	3
2024/2025	OPTS41201	Anatomy 2	2	–	2
2024/2025	OPTS41207	Arabic Language	2	–	2
2024/2025	OPTS41205	Computer Principles 2	1	–	2
2024/2025	OPTS41204	Biology 2	2	–	2

Second Stage / First Semester

Academic Year	Course Code	Course Name	Type
2024/2025	OPTS42103	Ocular Health	Basic
2024/2025	OPTS42104	Refractive Errors	Basic
2024/2025	OPTS42102	Optical Devices	Basic
2024/2025	OPTS42101	Physiology of the Eye and Vision	Basic
2024/2025	OPTS42105	Statistical Applications	Elective
2024/2025	OPTS42106	Medical Terminology	Elective

Second Stage / Second Semester

Academic Year	Course Code	Course Name	Type
2024/2025	OPTS42203	Ocular Health 2	Basic
2024/2025	OPTS42204	Refractive Errors 2	Basic
2024/2025	OPTS42202	Optical Devices 2	Basic
2024/2025	OPTS42201	Physiology of the Eye and Vision 2	Basic
2024/2025	OPTS42205	Statistical Applications 2	Elective
2024/2025	OPTS42207	Introduction to Ophthalmology	Basic
2024/2025	OPTS42206	Drugs	Basic
2024/2025	OPTS42208	Arabic Language	Elective

Third Stage / First Semester

Academic Year	Course Code	Course Name	Type
2024/2025	OPTS43103	Systemic Problems / Systemic Disorders 1	Basic
2024/2025	OPTS43104	Refractive Errors 3	Basic
2024/2025	OPTS43102	Optical Devices 3	Basic
2024/2025	OPTS43101	Medical Spectacles 1	Basic
2024/2025	OPTS43105	Strabismus 1	Basic
2024/2025	OPTS43107	Laser Treatment of Eye Diseases	Basic
2024/2025	OPTS43106	Computer Applications 1	Elective

Third Stage / Second Semester

Academic Year	Course Code	Course Name	Type
2024/2025	OPTS43203	Systemic Problems / Systemic Disorders 2	Basic
2024/2025	OPTS43204	Refractive Errors 4	Basic
2024/2025	OPTS43202	Optical Devices 4	Basic
2024/2025	OPTS43201	Medical Spectacles 2	Basic
2024/2025	OPTS43205	Strabismus 2	Basic
2024/2025	OPTS43207	Research Methods	Elective
2024/2025	OPTS43206	Computer Applications 2	Elective

8. Expected Learning Outcomes

- Knowledge: The student knows and understands the fundamentals of the required sciences and analyzes the required scientific details and developments.
- Graduates are prepared as scientific cadres capable of operating and maintaining medical devices used in eye examination.
- Students acquire the knowledge, intellectual and practical skills required in vision examination devices and the skills needed to deal with different eye-disease cases and intervene as required.
- Skills: Good knowledge and technical ability in the principles of optics and related sciences; correct use of equipment and practical application of learned skills.
- Values: Commitment to university institutional ethics, acceptance of knowledge, teamwork, and recognition of the importance of the study materials.

9. Teaching and Learning Methods

Theoretical and practical lectures, preparation of scientific reports, and research

10. Assessment Methods

Examinations, reports and research writing, scientific discussions, attendance, and daily activities

11. Teaching Staff

Academic Rank / Staff Member	Specialization / Qualification	Status / Requirements
Prof. Dr. Majid Hussein	Sciences	Permanent staff / courses
Asst. Lecturer Haider Ali Faleej	Arabic Language	Permanent staff / courses
Asst. Lecturer Safaa Mohammed Karoem	Veterinary Sciences	Permanent staff / courses
Asst. Lecturer Taman Kamel	General Sciences	Permanent staff / courses
Lecturer Zainab Qasim Mohammed	Sciences	Permanent staff / courses
Asst. Lecturer Enas Al-Samarqandi Ali	Medicine and Surgery / Ophthalmology	Permanent staff / courses
Asst. Lecturer Ghusun Shakir	Sciences / Physics	Permanent staff / courses
Asst. Lecturer Ali Jasim Abdul Ridha	Optics / Optometry	Permanent staff / courses
Asst. Lecturer Ahmed Hashim Mohammed	Sciences	Permanent staff / courses
Asst. Lecturer Abdul Amir	General Medicine / Diseases	Permanent staff / courses
Hussein Abdul Hamid	Pharmacy	Staff
Mohammed Abbas Saher	Law / Public Law	Staff

Teaching Staff Development

A brief description of the process used to orient new, visiting, and part-time teaching staff within the institution and department.

New teaching staff are oriented toward developing the scientific curriculum, lecture-delivery methods, and ways of communicating scientific material to students.

12. Admission Standard

Graduates of preparatory/secondary education in the scientific branch and other accepted branches are eligible for admission to the Department of Optics Technologies.

13. Most Important Information about the Program

- Prescribed books are those approved by the Ministry of Higher Education and Scientific Research.
- External scientific sources and the Internet are also used.

14. Program Development Plan

The department has several curricular and research plans for developing the department and its scientific environment through the Department Council and the Scientific Committee.

Program Skills Map – Page 8

Program Skills Map – Learning Outcomes Required from the Program

Year / Level	Course Code	Course Name	Core / Elective	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3	V4
2024/2025 – 1st Stage / 1st Semester	OPTS41102	Principles of Chemistry	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41103	Medical Physics	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41101	Anatomy	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41107	English Language	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41105	Computer Principles 1	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41106	Human Rights	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 1st Semester	OPTS41104	Biology	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 2nd Semester	OPTS41202	Principles of Biochemistry 2	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2024/2025 – 1st Stage / 2nd Semester	OPTS41203	Medical Physics 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Program Skills Map – Page 9

Program Skills Map – Learning Outcomes Required from the Program

Year / Level	Course Code	Course Name	Core / Elective	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3	V4
1st Stage / 2nd Semester	OPTS41201	Anatomy 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1st Stage / 2nd Semester	OPTS41207	Arabic Language	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1st Stage / 2nd Semester	OPTS41205	Computer Principles 2	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1st Stage / 2nd Semester	OPTS41204	Biology 2	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42103	Ocular Health	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42104	Refractive Errors	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42102	Optical Devices	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42101	Physiology of the Eye and Vision	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42105	Statistical Applications	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 1st Semester	OPTS42106	Medical Terminology	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Program Skills Map – Learning Outcomes Required from the Program

Year / Level	Course Code	Course Name	Core / Elective	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3	V4
2nd Stage / 2nd Semester	OPTS42201	Physiology of the Eye and Vision 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42202	Optical Devices 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42208	Arabic Language	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42204	Refractive Errors 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42205	Statistical Applications 2	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42207	Introduction to Ophthalmology	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd Stage / 2nd Semester	OPTS42206	Drugs	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43103	Systemic Problems / Systemic Disorders 1	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Program Skills Map – Learning Outcomes Required from the Program

Year / Level	Course Code	Course Name	Core / Elective	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3	V4
3rd Stage / 1st Semester	OPTS43104	Refractive Errors 3	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43102	Optical Devices 3	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43101	Medical Spectacles 1	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43105	Strabismus 1	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43107	Laser Treatment of Eye Diseases	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 1st Semester	OPTS43106	Computer Applications 1	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43203	Systemic Problems / Systemic Disorders 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43204	Refractive Errors 4	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43202	Optical Devices 4	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43201	Medical Spectacles 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Program Skills Map – Learning Outcomes Required from the Program

Year / Level	Course Code	Course Name	Core / Elective	K1	K2	K3	K4	S1	S2	S3	S4	V1	V2	V3	V4
3rd Stage / 2nd Semester	OPTS43205	Strabismus 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43207	Research Methods	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3rd Stage / 2nd Semester	OPTS43206	Computer Applications 2	Elective	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note: A check mark (✓) is placed in the cells corresponding to the program learning outcomes used for assessment.