				practical	
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Final Review and Practical Exam	Knowledge and application	2 theoretical 3 + practical	fifteenth

Course Evaluation -11
Student activities and reports, oral and written theoretical and practical exams
-40

Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)
	Recommended books and references (scientific journals, (...reports
	Electronic references and websites

Course Description / Level Three

Laboratory safety	Course name -1
MTCD302	Course code -2
First semester 2025/2026	Semester/Year -3
2025/9/1	Date of preparation of the description -4

In-person lectures	**Available forms of -5 attendance**
theoretical hours / 2 units 30	**Number of credit hours (total) / -6 Number of units (total)**
M.M. Mustafa Khalil Ibrahim	**Name of the course supervisor -7 mention all names, if there is more) (than one name**

Course objectives -8

Protecting workers, equipment, and the environment by assessing risks, providing a safe work environment, training employees, using personal protective equipment, providing clear emergency procedures, and ensuring proper handling of chemicals and waste. These goals help prevent accidents and damages, reduce costs resulting from injuries, and maintain .the facility's reputation and safety

Teaching and learning strategies -9

Use personal safety equipment such as goggles, adhere to standard operating procedures, and closely monitor equipment, with an emphasis on assessing the specific risks involved in each experiment. Instructional strategies include providing a visually interactive learning environment, applying collaborative learning techniques, and conducting practical workshops to teach proper tool .use techniques and how to respond to emergencies

. B. Course specific skill objectives

Enable students to apply basic safety procedures, properly handle materials, equipment, and tools, use appropriate personal protective equipment, respond effectively to emergencies, and safely dispose of waste, with an emphasis on .awareness of special hazards in the optics laboratory environment

Teaching and learning methods

In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects
. Scientific visits and practical training in hospitals by specialized medical staff

Evaluation methods

Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson

C. Affective and value- based goals

- **Instilling values of responsibility and commitment:**
  - **Promote a sense of responsibility towards oneself, colleagues and patients in the laboratory environment.**

- Commitment to implementing safety rules and preventive measures to provide a safe work environment.
- Adherence to professionalism in dealing with patients and examination tools.

- Developing a culture of safety:
  - A deep appreciation of the importance of safety as an essential part of providing high-quality vision care.
  - Awareness of potential hazards in optics laboratories and how to avoid them.
  - Develop the skill of identifying and assessing risks and taking appropriate preventive measures.
- Promoting ethical and professional values:
  - Show patience and understanding when presenting test results to patients.
  - Appreciating the high human values and ethics in the field of health and vision care.
  - Dealing sensitively and responsibly with patients' needs and privacy .
- Appreciating the importance of technology and innovation:
  - Deep understanding of the importance of technology in achieving accuracy and efficiency in eye care.
  - Be flexible in learning and using new technologies to ensure best care practices.
- Developing environmental and health awareness:
  - Willingness to participate in implementing policies to maintain cleanliness and sterilization of equipment to prevent contamination.
  - Striving to educate patients and raise their awareness of the . importance of maintaining healthy eyes

(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects

- **Evaluation methods**

Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital

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

.D1 . Skills of cooperation and teamwork

.D2 . Computer typing skills

.D3 . English communication skills

.D4 . Skills of enduring work performance and solving problems

. D5 . Internet conversation skills

Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Introduction to Laboratory Safety Definition of laboratory safety, importance of safety, responsibilities of laboratory .workers	Knowledge and application	2 theoretical	the first
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	:Types of hazards in laboratories chemical, physical, biological, and electrical hazards. .Examples of accidents	Knowledge and application	2 theoretical	the second
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	) Personal Protective Equipment PPE Safety glasses, gloves, :(coveralls, face masks. When and .how to use them	Knowledge and application	2 theoretical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Emergency procedures Evacuation plan, use of fire extinguishers, first .aid, exposure to materials	Knowledge and application	2 theoretical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Safety signs and warnings Reading and understanding hazard symbols, labels, and laboratory signs	Knowledge and application	2 theoretical	Fifth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Storage and transportation of :chemicals safe storage rules, separation of reactants, safe transportation of materials	Knowledge and application	2 theoretical	Sixth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	:Handling laboratory waste waste classification, disposal methods, appropriate containers, student responsibilities	Knowledge and application	2 theoretical	Seventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Safety in optical laboratories Optics laboratories specialties: lasers, .lenses, precision optical devices	Knowledge and application	2 theoretical	The eighth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Laser risks and prevention methods Types of lasers, eye and skin hazards, laser safety glasses, warning areas	Knowledge and application	2 theoretical	Ninth
Reports, oral and written	whiteboard, powerpoint	Handling sensitive optical equipment Rules for handling	Knowledge and	2 theoretical	tenth

theoretical exams	slides, hands-on experiments	equipment, calibration, preventive maintenance, and storing tools	application		
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Laboratory Accident Analysis Real case studies, causes of accidents, lessons learned	Knowledge and application	2 theoretical	eleventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Safety Culture and Laboratory Behaviors Building a culture of safety, positive and negative behaviors, the role of supervisors and students	Knowledge and application	2 theoretical	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Practical training (1) Field tour of the laboratory, hazard identification, evaluation of the use of protective equipment	Knowledge and application	2 theoretical	thirteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Practical training (2) Implement a mock emergency plan, use a fire extinguisher, review the evacuation plan	Knowledge and application	2 theoretical	fourteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Final review and evaluation Comprehensive review, practical/theoretical test, assessment of students' safety behavior	Knowledge and application	2 theoretical	fifteenth

Course Evaluation -11	
Student activities and reports, oral and written theoretical and practical exams	
-41	
Learning and Teaching Resources - 12	
	Required textbooks (curriculum books, if available)
Internet	Main References (Sources)
	Recommended books and references (scientific journals, (...reports
	Electronic references and websites

Medical research methods	Course name -1
MTCD303	Course code -2
Second semester 2025/2026	Semester/Year -3
2025/9/1	Date of preparation of the description -4
In-person lectures	Available forms of attendance -5
theoretical hours / 2 units 30	Number of credit hours (total) / Number of units (total) -6

M.M. Mustafa Khalil Ibrahim	**Name of the course supervisor -7 mention all names, if there is more) (than one name**

Course objectives -8

Preparing and training specialized personnel in diagnosing and treating vision problems, and developing scientific curricula and techniques used in eye examinations and the manufacture of medical lenses. This research aims to improve the quality of ophthalmic healthcare, fill the shortage of specialized personnel, and provide the community with qualified personnel to work in hospitals and health centers, in addition to promoting a culture of scientific .research in the field of optics

Teaching and learning strategies -9

Using a combination of direct instruction and experiential and interactive learning, with an emphasis on critical thinking skills and visual analysis, and supporting a supportive learning environment through collaborative learning and providing ample opportunities for practice and feedback

. B. Course specific skill objectives

Using a combination of direct instruction and experiential and interactive learning, with an emphasis on critical thinking skills and visual analysis, and supporting a supportive learning environment through collaborative learning and providing ample opportunities for practice and feedback

Teaching and learning methods

In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects
. Scientific visits and practical training in hospitals by specialized medical staff

Evaluation methods

Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson

C. Affective and value- based goals
:FirstAffective Objectives
These objectives focus on developing the student's emotional and value-based :aspects and attitudes towards science and medical research, and include
Developing the spirit of scientific curiosity in students and encouraging them .1 .to investigate and conduct continuous research in the field of optics

Promote a positive trend towards scientific research as a tool for .2 understanding and developing optical services and improving the quality of .healthcare

Instilling ethical values in research practice, such as scientific honesty, .3 .integrity, and commitment to research and publication standards

Developing a sense of social responsibility by selecting research topics that .4 .serve society and meet its health needs

Stimulating collaborative work within multidisciplinary research teams and .5 .developing effective scientific communication skills

Respect the rights of patients and research participants, and emphasize the .6 .importance of informed consent and confidentiality

Second: National/Ethical Objectives

These are the objectives related to strengthening national belonging and :serving the issues of society and the nation through scientific research

Strengthening national belonging by encouraging research into health issues .1 .of concern to the local community, particularly the Iraqi community

Encouraging applied research that contributes to the development of the .2 .optics and healthcare sector in Iraq

Contributing to achieving national health development goals through .3 scientific research that contributes to reducing eye diseases and improving .diagnosis and treatment

Motivating students to link theoretical knowledge to practical reality in the .4 .Iraqi medical environment

Support national self-sufficiency efforts in the field of optical equipment and .5 .services through innovative research

Instilling the principles of citizenship and health awareness among students .6 .as future researchers, capable of leading change in the healthcare system

(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects

- Evaluation methods

Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital

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

.D1 . Skills of cooperation and teamwork

.D2 . Computer typing skills

.D3 . English communication skills

.D4 . Skills of enduring work performance and solving problems

. D5 . Internet conversation skills

Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Introduction to Medical Scientific Research Definition of medical research and its .importance The difference between medical research and research in other .sciences Research Ethics (including IRB approval (	Knowledge and application	2 theoretical	the first
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Types of medical research .Basic vs. clinical research .Quantitative and qualitative research Observational andexperimental studies .	Knowledge and application	2 theoretical	the second
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Choosing a research topic and formulating the problem .How to choose a suitable topic Characteristics of a good research .problem Examples from the field of optics .technologies	Knowledge and application	2 theoretical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Formulating the research hypothesis and study objectives The difference between hypothesis and .research questions .Formulate clear and measurable goals Practical examples from clinical cases in optics	Knowledge and application	2 theoretical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Review of literature and scientific sources How to search medical databases such as)PubMed ,Scopus .(Evaluation of sources: primary and .secondary Use reference management software such as)Mendeley ,Zotero)	Knowledge and application	2 theoretical	Fifth
Reports, oral and written	whiteboard, powerpoint slides,	Study Design Descriptive, analytical, experimental .design	Knowledge and	2 theoretical	Sixth

theoretical exams	hands-on experiments	Case-control studies, longitudinal .studies Applications to studies in eye .examination or vision correction	applicati on		
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Study community and sample .Identify the target community Types of samples (random, stratified, .(...cluster Determine sample size using software such as)G*Power (	Knowle dge and applicati on	2 theore tical	Sevent h
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Data collection tools Questionnaires, interviews, .observations, measuring devices .Design an effective questionnaire .Measuring instruments in optics (e.g Snellen chart ,autorefractor (	Knowle dge and applicati on	2 theore tical	The eighth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Validity and reliability of measurement tools Types of validity (apparent, content, .(structural Resilience (internal, external, .(reapplication Practical examples of eye examination tools	Knowle dge and applicati on	2 theore tical	Ninth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Data collection and field problems .Data collection steps Common problems during data .collection and how to deal with them Privacy and confidentiality of patient information	Knowle dge and applicati on	2 theore tical	tenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Statistical analysis of data .Descriptive and analytical statistics Use of analysis software (such asSPSS ,Excel .(Analysis examples from studies in optics	Knowle dge and applicati on	2 theore tical	elevent h
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Interpretation and presentation of results How to interpret the results .scientifically .Charts and tables Linking results to study objectives	Knowle dge and applicati on	2 theore tical	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Writing a medical research report Report components (abstract, introduction, methodology, results, .(discussion, conclusion .Scientific writing style .Common mistakes in writing research	Knowle dge and applicati on	2 theore tical	thirtee nth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Research presentation and presentation skills) How to present research orally PowerPoint .(Scientific communication and .presentation skills Discussing student research or previous research models	Knowle dge and applicati on	2 theore tical	fourtee nth

Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Final Assessment and General Review .Comprehensive review of the material .Discuss test questions Show student project summaries, if .any	Knowledge and application	2 theoretical	fifteenth

Course Evaluation -11
Student activities and reports, oral and written theoretical and practical exams
-42

Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)
	Recommended books and references (scientific journals, (...reports
	Electronic references and websites

computer applications	Course name -1
MTCD301	Course code -2

Second semester 2025/2026	**Semester/Year -3**
2025/9/1	**Date of preparation of the -4 description**
In-person lectures	**Available forms of -5 attendance**
hours of theory + 15 hours of practical / 2 15 units	**Number of credit hours (total) / -6 Number of units (total)**
Mr. Ahmed Siddiq Bakr	**Name of the course supervisor -7 mention all names, if there is more) (than one name**

Course objectives -8

Automating tasks such as word processing and data processing, improving communication across networks and the Internet, enhancing learning and training through multimedia, providing accuracy and speed in fields such as medicine and accounting, helping people with disabilities through assistive technologies, and reducing human error and increasing efficiency in work .environments and institutions

Teaching and learning strategies -9

Teaching strategies for the Computer Applications course include active learning such as collaborative learning, brainstorming, and problem solving, in addition to e-learning strategies such as the flipped classroom, electronic projects, .and augmented reality to enhance participation and interaction

. B. Course specific skill objectives

Enabling the student to use the computer and application programs efficiently , such as word processing programs, spreadsheets, and presentations, and to use the Internet for research and communication, in addition to the ability to explore various computer applications in various areas of life and learn .how to use it to increase productivity

Teaching and learning methods

In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects
. Scientific visits and practical training in hospitals by specialized medical staff

Evaluation methods

Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson

ج. **Affective and value-based goals**

- **Importance assessment:**
  The student should appreciate the role of the computer and its importance in facilitating work and daily life.
- **Moral responsibility:**
  The student must demonstrate a commitment to using technology in an ethical, safe and responsible manner.
- **Cooperation and participation:**
  The student should have a spirit of cooperation and participation with his colleagues when working on group applications.
- **Formation of tendencies:**
  Developing positive and purposeful tendencies towards computers, their applications and information technology.
- **Responding to the requirements of the era:**
  That the student be able to keep up with modern life and its electronic requirements.
- **Interacting with the digital environment:**
  Building a generation open to the information world and capable of empathy and interaction in a digital environment[6 9 ,].

How to achieve these goals:

- **Providing an interactive learning environment:**
  Using computers to provide rich learning experiences with audio, video, and movement to attract and motivate students.
- **Encouraging teamwork:**
  Involving students in group projects and applications to enhance the spirit of cooperation among them.
- **Focus on usage ethics:**
  Guiding students towards the ethical and safe use of information and digital technologies.
- **Link to daily reality:**
  Explain how computer applications contribute to facilitating daily tasks and .enhancing productivity

(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects

- **Evaluation methods**

Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital

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

.D1 . Skills of cooperation and teamwork

.D2 . Computer typing skills

.D3 . English communication skills

.D4 . Skills of enduring work performance and solving problems

. D5 . Internet conversation skills

Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Learn about Excel , its benefits, .specifications, and operating method	Knowledge and application	1 theoretical 1 + practical	the first
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Getting to know the main screen, its components, tools, and menu bar	Knowledge and application	1 theoretical 1 + practical	the second
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Cell Concept Basic Data Types and How to Enter Them	Knowledge and application	1 theoretical 1 + practical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	the workbook and close the file program	Knowledge and application	1 theoretical 1 + practical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Open a saved file, enter data, perform .simple calculations, and format cells	Knowledge and application	1 theoretical 1 + practical	Fifth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Learn how to collect data or group cells in different forms and sort data	Knowledge and application	1 theoretical 1 + practical	Sixth

Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	:Use some common functionsAverage, Sum, Min , Mix, Count, Sprt	Knowledge and application	1 theoretical 1 + practical	Seventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Cell editing process, copying data, moving it, copying absolute and relative cell calculations	Knowledge and application	1 theoretical 1 + practical	The eighth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Control cell display and change its .style using formatting tools	Knowledge and application	1 theoretical 1 + practical	Ninth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Dealing with charts, their various components and elements, and learning about their types	Knowledge and application	1 theoretical 1 + practical	tenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Methods of creating charts, choosing different types of charts and their concept	Knowledge and application	1 theoretical 1 + practical	eleventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Edit data and charts and make various revisions to them	Knowledge and application	1 theoretical 1 + practical	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Dealing withLists List Creation , ,ConditionsSorting Lists	Knowledge and application	1 theoretical 1 + practical	thirteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Filtering lists , especially automatic and advanced filtering	Knowledge and application	1 theoretical 1 + practical	fourteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	How to add or delete rows or columns How to print the worksheet as data and charts	Knowledge and application	1 theoretical 1 + practical	fifteenth

Course Evaluation -11	
Student activities and reports, oral and written theoretical and practical exams	
-43	
Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)
	Recommended books and references (...scientific journals, reports)
	Electronic references and websites

eyeglasses	**Course name -1**
OPT303	**Course code -2**
First semester 2025/2026	**Semester/Year -3**
2025/9/1	**Date of preparation of the description -4**
In-person lectures	**Available forms of attendance -5**
theoretical hours + 45 practical hours / 3 30 units	**Number of credit hours (total) / Number of units (total) -6**
D. Ahmed Talib Abdel Qader	**Name of the course supervisor mention all names, if there is more) (than one name -7**

Course objectives -8

Preparing specialists capable of examining and evaluating vision, correcting strabismus, designing, manufacturing, and fitting medical lenses and ophthalmic prostheses, in addition to handling and maintaining optical devices, and advising patients about the appropriate eyeglasses and .contact lenses for them

Teaching and learning strategies -9

Integrating theoretical knowledge with practical training, through lectures covering ocular anatomy and optical physics, workshops on lens .manufacturing and fitting, and field practice to apply skills in accredited centers Modern technologies such as medical computers are used in vision examinations, and the curriculum focuses on determining complex prescriptions, analyzing frame and lens design, and training students in adding filters and tints, with an emphasis on customer service skills, ethics, and time .management in optical centers

. B. Course specific skill objectives

Providing students with the skills necessary for eye examination, determining vision degrees, correcting strabismus, designing and manufacturing eyeglasses and optical prostheses, using modern tools and techniques in this .field, handling contact lenses, in addition to maintaining and caring for devices

Teaching and learning methods

In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects

. Scientific visits and practical training in hospitals by specialized medical staff

Evaluation methods
Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson
C. Affective and value- based goals Instilling moral and human values in students, such as patience and .understanding Towards patients, adherence to safety and hygiene standards , and showing appreciation for technology In the field of vision, we strive to educate patients, emphasizing the importance of professional ethics in vision .care and dealing with various healthcare specialties
(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects
• Evaluation methods
Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital
D. General and transferable skills (other skills related to employability and . (personal development .D1 . Skills of cooperation and teamwork .D2 . Computer typing skills .D3 . English communication skills .D4 . Skills of enduring work performance and solving problems . D5 . Internet conversation skills

Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Lenses, Types of Medical lenses with drawing.	Knowledge and application	2 theoretical 3 + practical	the first
Reports, oral and written	whiteboard, powerpoint slides,	How can write a prescription for patients.	Knowledge and application	2 theoretical 3 +	the second

theoretical exams	hands-on experiments			practical	
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	How can write a prescription for patients.	Knowledge and application	2 theoretical 3 + practical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	How can read a prescription for patients.	Knowledge and application	2 theoretical 3 + practical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Spectacles, Parts of Spectacles with drawing.	Knowledge and application	2 theoretical 3 + practical	Fifth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Spectacles frames. (Advantages).	Knowledge and application	2 theoretical 3 + practical	Sixth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Spectacles frames and measurements.	Knowledge and application	2 theoretical 3 + practical	Seventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Frames of sports and measurements.	Knowledge and application	2 theoretical 3 + practical	The eighth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Stages of making glass lens (Generation, Blocking and Polishing).	Knowledge and application	2 theoretical 3 + practical	Ninth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Centering the glass lens with the edging.	Knowledge and application	2 theoretical 3 + practical	tenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Coating, Coated requirements, Types of coating, Anti- Reflection coatings (AR) for (MC & HMC).	Knowledge and application	2 theoretical 3 + practical	eleventh

Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Coating, Coated requirements, Types of coating, Anti- Reflection coatings (AR) for (MC & HMC).	Knowledge and application	2 theoretical 3 + practical	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Blue Cut lens, Multifocal, Ensues, Progressive.	Knowledge and application	2 theoretical 3 + practical	thirteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Cementing lens for the different types of lenses.	Knowledge and application	2 theoretical 3 + practical	fourteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Revision	Knowledge and application	2 theoretical 3 + practical	fifteenth

Course Evaluation -11
Student activities and reports, oral and written theoretical and practical exams
-44

Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)
	Recommended books and references (scientific journals, (...reports
	Electronic references and websites

Glasses problems	Course name -1
OPT304	Course code -2
Second semester 2025/2026	Semester/Year -3
2025/9/1	Date of preparation of the description -4
In-person lectures	Available forms of attendance -5
theoretical hours + 45 practical hours / 3 30 units	Number of credit hours (total) / Number of units (total) -6
D. Ahmed Talib Abdel Qader	Name of the course supervisor (mention all names, if there is more than one name) -7

Course objectives -8

Providing students with the skills necessary to conduct eye examinations, identify and measure vision problems such as refraction and strabismus, suggest and prescribe appropriate types of lenses and eyeglasses for different patient conditions, as well as skills in manufacturing and fitting lenses, repairing damaged eyeglasses, caring for optical devices, and understanding how a patient's lifestyle affects the selection of the appropriate lens and frame design, in order to .prepare qualified and effective cadres in the field of eye care

Teaching and learning strategies -9

utilizes intensive practical education and clinical training in examining, fitting, and repairing eyeglasses, in addition to theoretical education on diagnosing and correcting vision problems, with an emphasis on skills in handling diagnostic equipment and interpreting clinical findings. Techniques such as situational simulations and interactive workshops are also used to develop students' skills and provide them with the applied knowledge necessary to support physicians in diagnosing and .resolving visual problems

. B. Course specific skill objectives

prepares graduates to work as specialized technicians capable of diagnosing various vision problems, determining the appropriate type of lenses, fitting, examining, and maintaining eyeglasses, using optical medical devices, and identifying appropriate alternatives such as contact lenses. The course also aims to enable students to understand patients'

needs and recommend frames and lenses appropriate for their work and .daily life
Teaching and learning methods
In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects . Scientific visits and practical training in hospitals by specialized medical staff
Evaluation methods
Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson
C. Affective and value- based goals Equipping students with the ability to treat patients with sensitivity and responsibility, appreciate the importance of eye health, adhere to ethical and professional standards in providing vision care, and promote innovation in developing innovative optical solutions to correct various .vision problems
(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects
• Evaluation methods
Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital
D. General and transferable skills (other skills related to employability and . (personal development .D1 . Skills of cooperation and teamwork .D2 . Computer typing skills .D3 . English communication skills .D4 . Skills of enduring work performance and solving problems . D5 . Internet conversation skills
Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Introduction to Spectacle Problems	Knowledge and application	2 theoretical 3 + practical	the first
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Lens Power Errors	Knowledge and application	2 theoretical 3 + practical	the second
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Lens Positioning Errors	Knowledge and application	2 theoretical 3 + practical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Frame Fit and Adjustment Issues	Knowledge and application	2 theoretical 3 + practical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Multifocal and Progressive Lens Problems	Knowledge and application	2 theoretical 3 + practical	Fifth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Prism-Related Problems	Knowledge and application	2 theoretical 3 + practical	Sixth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Lens Material and Coating Problems	Knowledge and application	2 theoretical 3 + practical	Seventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Midterm Review + Quiz / Assessment	Knowledge and application	2 theoretical 3 + practical	The eighth
Reports, oral and written	whiteboard, powerpoint slides,	Aniseikonia and Magnification Issues	Knowledge and	2 theoretical	Ninth

theoretical exams	hands-on experiments		applicati on	3 + practi cal	
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Asthenopia and Visual Fatigue from Glasses	Knowle dge and applicati on	2 theore tical 3 + practi cal	tenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Pediatric Spectacle Problems	Knowle dge and applicati on	2 theore tical 3 + practi cal	elevent h
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Special Cases - High Prescriptions	Knowle dge and applicati on	2 theore tical 3 + practi cal	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Case Studies and Troubleshooting Workshop	Knowle dge and applicati on	2 theore tical 3 + practi cal	thirtee nth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Communication with Patients	Knowle dge and applicati on	2 theore tical 3 + practi cal	fourtee nth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Final Review + Practical Assessment	Knowle dge and applicati on	2 theore tical 3 + practi cal	fifteent h

Course Evaluation -11
Student activities and reports, oral and written theoretical and practical exams
-45

Learning and Teaching Resources - 12	
	Required textbooks (curriculum books, (if available
Internet	Main References (Sources)
	Recommended books and references (...scientific journals, reports)
	Electronic references and websites

Eye problems with internal diseases	**Course name -1**
OPT302	**Course code -2**
First semester 2025/2026	**Semester/Year -3**
2025/9/1	**Date of preparation of the description -4**
In-person lectures	**Available forms of attendance -5**
theoretical hours + 45 practical hours / 3 30 units	**Number of credit hours (total) / Number of units (total) -6**
Dr. Ibrahim Ihsan Fadel	**Name of the course supervisor mention all names, if there is more than one name) (-7**

Course objectives -8

To provide optometry students with the knowledge and skills necessary to understand how diseases of the body's internal organs (such as internal diseases) affect the eye, how to recognize these diagnostic effects, and distinguish them from other visual problems to ensure the patient is referred to a specialist physician and provided with appropriate care

Teaching and learning strategies -9

Using diverse teaching strategies including problem-based learning(PBL) to understand complex diseases, experiential learning through clinical examination simulation and diagnostic tools such as ophthalmic scanners , incorporating interactive tools to enhance engagement, with an emphasis on collaborative learning through case study groups, and developing effective .communication skills with patients

. B. Course specific skill objectives

Enabling the graduate to link eye diseases with internal diseases of the body such as(diabetes , high blood pressure) by identifying their indicators in the eye, understanding how these systemic diseases affect the eye, suggesting appropriate referral paths to ophthalmologists, and providing health education about the prevention of these diseases and their relationship to general eye .health

Teaching and learning methods

In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects

. Scientific visits and practical training in hospitals by specialized medical staff

Evaluation methods

Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson

C. Affective and value- based goals

Developing a set of emotional and ethical skills in students, such as showing patience and understanding with patients, prioritizing patient safety by following sterilization policies, understanding the importance of technology in eye care, appreciating ethical and human values, and working within a .multidisciplinary team

(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects

- **Evaluation methods**

Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital

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

.D1 . Skills of cooperation and teamwork

.D2 . Computer typing skills

.D3 . English communication skills

.D4 . Skills of enduring work performance and solving problems

. D5 . Internet conversation skills

Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Introduction to Systemic Diseases and the Eye	Knowledge and application	2 theoretical 3 + practical	the first

Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Diabetes Mellitus and the Eye	Knowledge and application	2 theoretical 3 + practical	the second
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Hypertension and Ocular Complications	Knowledge and application	2 theoretical 3 + practical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Cardiovascular Disorders and the Eye	Knowledge and application	2 theoretical 3 + practical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Thyroid Eye Disease (Graves' Orbitopathy)	Knowledge and application	2 theoretical 3 + practical	Fifth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Autoimmune Diseases I – Rheumatoid Arthritis, Lupus	Knowledge and application	2 theoretical 3 + practical	Sixth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Autoimmune Diseases II – Sarcoidosis, Behçet's Disease	Knowledge and application	2 theoretical 3 + practical	Seventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Infectious diseases and the eye	Knowledge and application	2 theoretical 3 + practical	The eighth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Neurological Disorders and Visual Pathways	Knowledge and application	2 theoretical 3 + practical	Ninth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Renal Diseases and Ocular Manifestations	Knowledge and application	2 theoretical 3 + practical	tenth
Reports, oral and written	whiteboard, powerpoint slides,	Hepatic Diseases and the Eye	Knowledge and	2 theoretical	eleventh

theoretical exams	hands-on experiments		applicati on	3 + practi cal	
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Hematological Disorders and the Eye	Knowle dge and applicati on	2 theore tical 3 + practi cal	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Endocrine Disorders (Non-thyroid)	Knowle dge and applicati on	2 theore tical 3 + practi cal	thirtee nth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Drug-Induced Ocular Side Effects	Knowle dge and applicati on	2 theore tical 3 + practi cal	fourtee nth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Case Discussions and Clinical Integration	Knowle dge and applicati on	2 theore tical 3 + practi cal	fifteent h

Course Evaluation -11
Student activities and reports, oral and written theoretical and practical exams
-46

Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)
	Recommended books and references (scientific journals, (...reports
	Electronic references and websites

Eye problems with neurological diseases	**Course name -1**
OPT302	**Course code -2**
Second semester 2025/2026	**Semester/Year -3**
2025/9/1	**Date of preparation of the description -4**
In-person lectures	**Available forms of attendance -5**
theoretical hours + 45 practical hours / 3 30 units	**Number of credit hours (total) / Number of units (total) -6**
Dr. Ibrahim Ihsan Fadel	**Name of the course supervisor mention all names, if there is more than one name) -7**

Course objectives -8

The program prepares an optician capable of understanding the neuroanatomy of the eye, diagnosing symptoms and signs related to neurological disorders affecting vision, such as optic neuritis, providing initial assistance, and referring patients to a specialist. This program focuses on providing students with the knowledge and skills necessary to .connect neurological diseases to their effects on vision

Teaching and learning strategies -9

Interactive teaching, hands-on training in the use of assistive devices and software, collaborative learning among students, and ongoing support. These strategies focus on building a deep understanding of neurological conditions affecting the eye, developing skills to assess and manage these conditions, and enhancing students' ability to collaborate with other healthcare . professionals

. B. Course specific skill objectives

Enabling students to identify diseases and disorders of the optic nerve and the nervous system associated with the eye, examine the optic nerve and diagnose its diseases, determine appropriate treatment for them, apply vision .correction techniques and deal with nerve injuries that affect vision

Teaching and learning methods

In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects
. Scientific visits and practical training in hospitals by specialized medical staff

Evaluation methods

Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson

C. Affective and value- based goals
Instilling values of empathy for patients, appreciation for precision work, and a deep understanding of the importance of eye care from a neurological perspective. The department focuses on training opticians who are characterized by professional responsibility and commitment to work ethics, and developing students' ability to accurately diagnose eye diseases .associated with neurological conditions and provide appropriate care

(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects

- **Evaluation methods**

Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital

D. General and transferable skills (other skills related to employability and . (personal development
.D1 . Skills of cooperation and teamwork
.D2 . Computer typing skills
.D3 . English communication skills
.D4 . Skills of enduring work performance and solving problems
. D5 . Internet conversation skills

Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written	whiteboard, powerpoint slides,	Introduction to Neuro-ophthalmology	Knowledge and	2 theoretical	the first

theoretical exams	hands-on experiments		application	3 + practical	
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Anatomy and Physiology of the Visual Pathway	Knowledge and application	2 theoretical 3 + practical	the second
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Visual Field Defects in Neurological Disorders	Knowledge and application	2 theoretical 3 + practical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Optic Neuropathies – Part I	Knowledge and application	2 theoretical 3 + practical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Optic Neuropathies – Part II	Knowledge and application	2 theoretical 3 + practical	Fifth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Papilledema and Raised Intracranial Pressure	Knowledge and application	2 theoretical 3 + practical	Sixth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Midterm Review and Case Discussions	Knowledge and application	2 theoretical 3 + practical	Seventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Cranial Nerve Palsies – Part I	Knowledge and application	2 theoretical 3 + practical	The eighth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Cranial Nerve Palsies – Part II	Knowledge and application	2 theoretical 3 + practical	Ninth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Nystagmus and Neurological Causes of Eye Movement Disorders	Knowledge and application	2 theoretical 3 + practical	tenth

Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Myasthenia Gravis and Other Neuromuscular Junction Disorders	Knowledge and application	2 theoretical 3 + practical	eleventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Visual Pathway Lesions and Cortical Blindness	Knowledge and application	2 theoretical 3 + practical	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Tumors Affecting Vision	Knowledge and application	2 theoretical 3 + practical	thirteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Stroke and Transient Visual Loss	Knowledge and application	2 theoretical 3 + practical	fourteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Final Review & Student Presentations	Knowledge and application	2 theoretical 3 + practical	fifteenth

Course Evaluation -11
Student activities and reports, oral and written theoretical and practical exams
-47

Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)
	Recommended books and references (scientific journals, (...reports
	Electronic references and websites

squint	**Course name -1**
OPT305	**Course code -2**
First semester 2025/2026	**Semester/Year -3**
2025/9/1	**Date of preparation of the description -4**
In-person lectures	**Available forms of attendance -5**
theoretical hours + 45 practical hours / 3 30 units	**Number of credit hours (total) / Number of units (total) -6**
D. Ahmed Talib Abdel Qader	**Name of the course supervisor mention all names, if there is more than one name) -7**

Course objectives -8

Training technical personnel to diagnose strabismus (eye deviation), identify its causes and symptoms, and then implement the necessary corrective measures by evaluating vision, suggesting appropriate lenses, .and helping patients regain proper vision

Teaching and learning strategies -9

Integrating visual and practical teaching and learning strategies, such as the use of assistive devices for visually impaired individuals, providing hands-on training on equipment, collaborative learning among students, and the use of .practical simulations and virtual reality to apply theoretical concepts

. B. Course specific skill objectives

Providing students with the skills necessary to diagnose and evaluate strabismus, develop appropriate treatment plans based on examination results, and manufacture and adapt the lenses needed to correct strabismus, .in addition to using advanced computer tools and techniques in this field

Teaching and learning methods

In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects

. Scientific visits and practical training in hospitals by specialized medical staff

Evaluation methods
Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson
C. Affective and value- based goals To enhance the graduate's ethical and professional values, and develop his skills in diagnosing, treating, and following up on eye conditions, while emphasizing adherence to professional and ethical standards to provide distinguished healthcare to patients, and ensuring the best possible treatment .outcomes
(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects
• Evaluation methods
Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital
D. General and transferable skills (other skills related to employability and . (personal development **.D1 . Skills of cooperation and teamwork** **.D2 . Computer typing skills** **.D3 . English communication skills** **.D4 . Skills of enduring work performance and solving problems** **. D5 . Internet conversation skills**

Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Component, description, and structure of squint examination unit	Knowledge and application	2 theoretical 3 + practical	the first
Reports, oral and written	whiteboard, powerpoint slides,	Introduction to squint terminology and types	Knowledge and application	2 theoretical 3 +	the second

theoretical exams	hands-on experiments			practical	
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Ocular motility-1: Smooth pursuit.	Knowledge and application	2 theoretical 3 + practical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Ocular motility-2: Duction	Knowledge and application	2 theoretical 3 + practical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Ocular motility-3: Saccades.	Knowledge and application	2 theoretical 3 + practical	Fifth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Ocular motility-4: Convergence, Near point of convergence versus near point of accommodations.	Knowledge and application	2 theoretical 3 + practical	Sixth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	How to report results of ocular motility test	Knowledge and application	2 theoretical 3 + practical	Seventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Corneal light reflex tests-1: Hirschberg test.	Knowledge and application	2 theoretical 3 + practical	The eighth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Corneal light reflex tests-2: Krimsky test.	Knowledge and application	2 theoretical 3 + practical	Ninth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Corneal light reflex tests-3: How to document their results.	Knowledge and application	2 theoretical 3 + practical	tenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Cover tests-1: cover-uncover test.	Knowledge and application	2 theoretical 3 + practical	eleventh

Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Cover tests-2: Alternate cover test.	Knowledge and application	2 theoretical 3 + practical	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Cover tests-3: Prism cover test.	Knowledge and application	2 theoretical 3 + practical	thirteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Cover tests-4: Alternate prism cover test.	Knowledge and application	2 theoretical 3 + practical	fourteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Revision	Knowledge and application	2 theoretical 3 + practical	fifteenth

Course Evaluation -11
Student activities and reports, oral and written theoretical and practical exams
-48

Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)
	Recommended books and references (scientific journals, (...reports
	Electronic references and websites

Strabismus problems	**Course name -1**
OPT306	**Course code -2**
Second semester 2025/2026	**Semester/Year -3**
2025/9/1	**Date of preparation of the description -4**
In-person lectures	**Available forms of attendance -5**
theoretical hours + 45 practical hours / 3 30 units	**Number of credit hours (total) / Number of units (total) -6**
D. Ahmed Talib Abdel Qader	**Name of the course supervisor mention all names, if there is more than one name) -7**

Course objectives -8

Preparing specialized technical cadres to diagnose and evaluate strabismus, and proposing appropriate treatments through vision correction and fitting the necessary glasses and contact lenses, in addition to training them on the use of optical devices and dealing with various vision problems to meet the community's need for vision examination and correction .services

Teaching and learning strategies -9

Strategies based on active and interactive learning, such as project-based learning and problem-solving, and the use of advanced technology such as virtual reality simulation and visual data, with an emphasis on practical training .using specialized tools to develop diagnostic and therapeutic skills, can be used It is also recommended to implement personalized education to meet the needs of each individual student, encourage collaborative learning to share knowledge and experiences, and provide ongoing support to meet technical and clinical .challenges

. B. Course specific skill objectives

Providing students with diagnostic and practical skills in evaluating and treating strabismus, including: conducting the necessary visual examinations, diagnosing different types of strabismus, selecting appropriate lenses, using specialized medical devices, implementing treatment plans, and providing health education to patients and their families, with an emphasis on dealing .with children and the ethical principles of the optician profession

Teaching and learning methods
In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects . Scientific visits and practical training in hospitals by specialized medical staff
Evaluation methods
Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson
C. Affective and value- based goals Raising awareness of the importance of the humanitarian role of the .1 optician. Promote a sense of responsibility towards patients, especially children and those with special needs. Understanding the impact of strabismus .disorders on the patient's psychology and quality of life Establishing ethical and professional values in dealing with patients. Respect .2 patient privacy and confidentiality of information. Demonstrate honesty, .integrity, and compassion in communicating with patients and their families Promoting attention to quality and excellence in the provision of visual care. .3 Commitment to accuracy and care when conducting examinations and .diagnosis. Adopting the principle of “patient care first” in all procedures Instilling the value of teamwork and cooperation Appreciating the .4 importance of working within an integrated optical team (ophthalmologist, .(optician, orthoptist Collaborate with colleagues to solve complex problems and improve treatment .outcomes Developing a sense of social responsibility Belief in the importance of raising .5 community awareness about strabismus problems and the necessity of early detection. Support free screening programs and health initiatives in the .community Enhance self-confidence and professionalism Encourage the student to make .6 clinical decisions based on knowledge and skill. Strengthening independence in .thinking and initiative in continuous learning Respecting individual differences among patients Considering cultural, .7 social and psychological aspects when dealing with strabismus cases. .Demonstrate tolerance and understanding in diverse clinical settings
(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects

- **Evaluation methods**

Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital

D. General and transferable skills (other skills related to employability and . (personal development
.D1 . Skills of cooperation and teamwork
.D2 . Computer typing skills
.D3 . English communication skills
.D4 . Skills of enduring work performance and solving problems
. D5 . Internet conversation skills

Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Introduction to Strabismus	Knowledge and application	2 theoretical 3 + practical	the first
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Anatomy and Physiology of Eye Movements	Knowledge and application	2 theoretical 3 + practical	the second
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Classification of Strabismus	Knowledge and application	2 theoretical 3 + practical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Etiology of Strabismus	Knowledge and application	2 theoretical 3 + practical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Signs and Symptoms	Knowledge and application	2 theoretical 3 + practical	Fifth

Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Examination Techniques I	Knowledge and application	2 theoretical 3 + practical	Sixth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Examination Techniques II	Knowledge and application	2 theoretical 3 + practical	Seventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Amblyopia and Its Relation to Strabismus	Knowledge and application	2 theoretical 3 + practical	The eighth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Esotropia	Knowledge and application	2 theoretical 3 + practical	Ninth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Exotropia	Knowledge and application	2 theoretical 3 + practical	tenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Vertical Strabismus	Knowledge and application	2 theoretical 3 + practical	eleventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Paralytic and Restrictive Strabismus	Knowledge and application	2 theoretical 3 + practical	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Non-surgical Management	Knowledge and application	2 theoretical 3 + practical	thirteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Surgical Management of Strabismus	Knowledge and application	2 theoretical 3 + practical	fourteenth
Reports, oral and written	whiteboard, powerpoint slides,	Case Discussions and Course Review	Knowledge and	2 theoretical	fifteenth

theoretical exams	hands-on experiments		applicati on	3 + practi cal	

Course Evaluation -11	
Student activities and reports, oral and written theoretical and practical exams	
-49	
Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)
	Recommended books and references (scientific journals, (...reports
	Electronic references and websites

refractive errors	Course name -1
OPT307	Course code -2
First semester 2025/2026	Semester/Year -3
2025/9/1	Date of preparation of the description -4
In-person lectures	Available forms of attendance -5
theoretical hours + 45 practical hours / 3 30 units	Number of credit hours (total) / Number of units (total) -6
Prof. Dr. Ya'rab Qahtan Abdulrahman	Name of the course supervisor (than one name mention all names, if there is more) -7

Course objectives -8

Introducing students to the types of refractive errors such as myopia,) hyperopia , and astigmatism), and their causes Abnormalities in the eye,) lens or cornea), and how to measure them (Subjective refraction measurement) and its treatment (Eyeglasses, contact lenses, and surgery) and their effect on vision (Headache, blurred vision, and eye strain) to enable them to accurately diagnose and correct them to ensure the best visual acuity .for the patient

Teaching and learning strategies -9

Focus on practical understanding of diagnosis using tools such as manual and automatic refractive lenses, practical workshops on measuring prescription for people with various visual problems such as myopia and astigmatism , in addition to learning about different treatments such as changing lenses, glasses and contact lenses, and finally using practical scenarios to discuss how to target .and correct refractive error

. B. Course specific skill objectives

To enable graduates to accurately identify and diagnose types of refractive errors using appropriate examination tools, determine the most appropriate means of correction (eyeglasses, contact lenses, or surgical procedures), and effectively use computer-aided visual aids in diagnosing and treating these errors, with the ability to advise and guide patients on treatment options and .maintaining eye health

Teaching and learning methods
In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects . Scientific visits and practical training in hospitals by specialized medical staff
Evaluation methods
Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson
C. Affective and value- based goals Affective : Objectives Developing the student's internal motivation to learn about refraction and .1 .correct errors, and realizing its importance in improving the quality of vision Demonstrate interest and discipline when performing clinical examinations .2 .related to refractive errors (such as refraction examination) Positive interaction with classmates and medical team members during .3 .clinical case discussions and practical training Willingness to take responsibility when dealing with patients and providing .4 .the best level of visual care Feeling confident while practicing practical skills, such as using refraction .5 .examination tools (refractor , ophthalmoscopy , etc.) Respecting patients and appreciating their visual and human needs during .6 .examination and diagnosis : Objectives Value Objectives ✸ To enhance the value of accuracy and professionalism in measuring and .1 correcting refractive errors to ensure the provision of high-quality optical .services Commitment to professional ethics, such as confidentiality, honesty, and .2 .respect for patient privacy Adopting the value of teamwork and cooperation within the optical medical .3 .team Instilling the value of human concern and compassion when dealing with .4 .patients, especially sensitive groups (such as children and the elderly) Deepening the belief in the importance of optics as a means of improving the .5 .quality of life of individuals through vision correction Pride in professional identity as an optician capable of making a positive .6 .impact on society
In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects

- **Evaluation methods**

Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital

D. General and transferable skills (other skills related to employability and . (personal development
.D1 . Skills of cooperation and teamwork
.D2 . Computer typing skills
.D3 . English communication skills
.D4 . Skills of enduring work performance and solving problems
. D5 . Internet conversation skills

Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Ast i g m at i sm d e f i n i t i on& s i n g - sy m pt o m s	Knowledge and application	2 theoretical 3 + practical	the first
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Ast i g m at i sm type e & c o r r ec t i on	Knowledge and application	2 theoretical 3 + practical	the second
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	I 'm so much for you	Knowledge and application	2 theoretical 3 + practical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	An i so m e t r op i a& c o rrec t i on	Knowledge and application	2 theoretical 3 + practical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	An i s ei k on i a& c o rr e c t i on	Knowledge and application	2 theoretical 3 + practical	Fifth

Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Apha k i a & ps e udo A ph a k i a	Knowle dge and applicati on	2 theore tical 3 + practi cal	Sixth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	P re sb y op i a & C o rr ec t i on	Knowle dge and applicati on	2 theore tical 3 + practi cal	Sevent h
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Int r ao c u l a r l e ns	Knowle dge and applicati on	2 theore tical 3 + practi cal	The eighth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	E y e s t r a i n	Knowle dge and applicati on	2 theore tical 3 + practi cal	Ninth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	A m b l yop i ad e f i n i t i o n	Knowle dge and applicati on	2 theore tical 3 + practi cal	tenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	A m b l yop i at r e at m e nt	Knowle dge and applicati on	2 theore tical 3 + practi cal	elevent h
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	In my soul a c u i ty the st for r c h i l d	Knowle dge and applicati on	2 theore tical 3 + practi cal	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	In my life a c u i ty the st for r c h i l d	Knowle dge and applicati on	2 theore tical 3 + practi cal	thirtee nth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Condu c t i v e K e r a t o pl a s t y	Knowle dge and applicati on	2 theore tical 3 + practi cal	fourtee nth
Reports, oral and written	whiteboard, powerpoint slides,	R e v i s i on	Knowle dge and	2 theore tical	fifteent h

theoretical exams	hands-on experiments		application	3 + practical	

Course Evaluation -11
Student activities and reports, oral and written theoretical and practical exams
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Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)
	Recommended books and references (scientific journals, (...reports
	Electronic references and websites

Eye examination devices	**Course name -1**
OPT308	**Course code -2**
Second semester 2025/2026	**Semester/Year -3**
2025/9/1	**Date of preparation of the description -4**
In-person lectures	**Available forms of attendance -5**
theoretical hours + 45 practical hours / 3 30 units	**Number of credit hours (total) / Number of units (total) -6**
M.M. Suleiman Masara Karim	**Name of the course supervisor mention all names, if there is more) (than one name -7**

Course objectives -8

Preparing specialized personnel to examine and evaluate vision using optical medical devices, with a focus on determining vision and strabismus, prescribing eyeglasses and contact lenses, manufacturing ophthalmic prosthetics, and maintaining devices. Graduates acquire the skills necessary to use modern equipment, whether in clinics, hospitals, or lens fitting .workshops, qualifying them to work in the field of eye care

Teaching and learning strategies -9

Combining theoretical knowledge with practical skills , including theoretical explanation of types of devices and how they work, practical training on the operation and maintenance of these devices, the use of simulation to train students on examination and diagnosis, linking theoretical information to practical reality through field visits or specialized lectures, in addition to developing effective communication skills among students to interact with .patients

. B. Course specific skill objectives

Providing students of optometry with the practical and theoretical skills necessary to diagnose vision defects, accurately examine vision conditions, and evaluate visual aberrations such as strabismus using various devices. Skill objectives also include the ability to use computers in examinations, calibrate devices, measure lens parameters, prescribe eyeglasses and contact lenses, .and maintain and care for devices

Teaching and learning methods
In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects **. Scientific visits and practical training in hospitals by specialized medical staff**
Evaluation methods
Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson
C. Affective and value- based goals Instilling values of professional and ethical responsibility in students, such as patience and understanding when explaining test results to patients, attention to the cleanliness and sterilization of equipment to prevent infection, and adherence to evidence-based practices to achieve the highest levels of accuracy in vision care. It also seeks to develop an appreciation for the importance of technology in improving the efficiency of eye examinations, a desire to educate patients to enable them to maintain their visual health, and a high level of professionalism in dealing with patients and communicating with .various disciplines
(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects
• **Evaluation methods**
Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital
D. General and transferable skills (other skills related to employability and . (personal development **.D1 . Skills of cooperation and teamwork** **.D2 . Computer typing skills** **.D3 . English communication skills** **.D4 . Skills of enduring work performance and solving problems** **. D5 . Internet conversation skills**
Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Introduction to Optometric Instruments	Knowledge and application	2 theoretical 3 + practical	the first
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Visual Acuity Charts	Knowledge and application	2 theoretical 3 + practical	the second
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Retinoscope	Knowledge and application	2 theoretical 3 + practical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Autorefractor and Keratometer	Knowledge and application	2 theoretical 3 + practical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Trial Frame and Trial Lens Set	Knowledge and application	2 theoretical 3 + practical	Fifth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Phoropter (Refractor Head)	Knowledge and application	2 theoretical 3 + practical	Sixth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Slit Lamp Biomicroscope – Part I	Knowledge and application	2 theoretical 3 + practical	Seventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Slit Lamp Biomicroscope – Part II	Knowledge and application	2 theoretical 3 + practical	The eighth
Reports, oral and written	whiteboard, powerpoint slides,	Ophthalmoscopy – Direct	Knowledge and	2 theoretical	Ninth

theoretical exams	hands-on experiments		applicati on	3 + practi cal	
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Ophthalmoscopy – Indirect	Knowle dge and applicati on	2 theore tical 3 + practi cal	tenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Tonometers	Knowle dge and applicati on	2 theore tical 3 + practi cal	elevent h
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Perimetry (Visual Field Testing)	Knowle dge and applicati on	2 theore tical 3 + practi cal	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Color Vision Testing Devices	Knowle dge and applicati on	2 theore tical 3 + practi cal	thirtee nth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Binocular Vision Testing Instruments	Knowle dge and applicati on	2 theore tical 3 + practi cal	fourtee nth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Review and Practical Demonstration	Knowle dge and applicati on	2 theore tical 3 + practi cal	fifteent h

Course Evaluation -11
Student activities and reports, oral and written theoretical and practical exams
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Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)

	Recommended books and references (scientific journals, (...reports
	Electronic references and websites

Laser treatment of eye diseases	**Course name -1**
OPT309	**Course code -2**
Second semester 2025/2026	**Semester/Year -3**
2025/9/1	**Date of preparation of the description -4**
In-person lectures	**Available forms of attendance -5**
hours of theory + 30 hours of practical / 15 units 2	**Number of credit hours (total) / Number of units (total) -6**
Prof. Dr. Ya'rab Qahtan Abdulrahman	**Name of the course supervisor mention all names, if there is more) (than one name -7**

Course objectives -8

To enable students to understand the mechanism of laser operation in correcting refractive errors (such as myopia, hyperopia, and astigmatism) and treating retinal diseases (such as diabetic retinopathy and detachment) and high eye pressure, by providing them with the technical knowledge necessary to use these technologies, understanding their physical and medical foundations, and developing the practical skills to perform these .treatments accurately and effectively to provide better care to patients

Teaching and learning strategies -9

Strategies should be used that combine theoretical knowledge with practical application, such as interactive lectures focusing on laser principles and imaging techniques, as well as practical modules using simulators, clinical case studies that demonstrate how diseases are diagnosed and treated with lasers, and collaborative learning to enhance research and communication .skills

. B. Course specific skill objectives

To qualify technicians capable of using laser technologies in the treatment of retinal diseases (such as fixing tears and detachments) and other visual conditions that require precise intervention, in addition to understanding the

role of lasers in correcting refractive errors and improving vision stability in various cases, in order to support the efficiency of diagnosis and treatment in .the field of optics

Teaching and learning methods

In-person education (scientific films and videos, Laboratories, summer and (professional training, and graduation projects
. Scientific visits and practical training in hospitals by specialized medical staff

Evaluation methods

Daily tests, semester exams, final exams, weekly reports on the subject, seminars on the study subjects , discussions and conversations during the . lesson

C. Affective and value- based goals
Providing students with a deep knowledge and understanding of how laser technologies work in the field of vision care, appreciating their role in improving visual acuity, emphasizing the importance of precision and sensitive patient .care, and building high ethical and professional values in them

(In-person lectures), summer and professional training, graduation projects, . field visits, and practical training in clinical subjects

- **Evaluation methods**

Daily, midterm and final exams , weekly reports Patient seminars, clinical follow-up reports, and practical discussions followed by the practical lesson in . the hospital

D. General and transferable skills (other skills related to employability and . (personal development
.D1 . Skills of cooperation and teamwork
.D2 . Computer typing skills
.D3 . English communication skills
.D4 . Skills of enduring work performance and solving problems
. D5 . Internet conversation skills

Course structure -10

Evaluation method	Teaching method	Unit name/topic	Required learning	watches	week

			outcomes		
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Laser in medicine (Define , Properties, Advantage with Disadvantages, Types of laser).	Knowledge and application	1 theoretical 2 + practical	the first
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Laser in eye treatment (diseases in the eye, method of the treatment).	Knowledge and application	1 theoretical 2 + practical	the second
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Laser in eye treatment (diseases in the eye, method of the treatment).	Knowledge and application	1 theoretical 2 + practical	the third
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Laser effects on biological tissue, (thermal effect), (chemical, mechanical effects).	Knowledge and application	1 theoretical 2 + practical	Fourth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Laser effects on biological tissue, (thermal effect), (chemical, mechanical effects).	Knowledge and application	1 theoretical 2 + practical	Fifth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Co2 Laser (wavelength = 10.6 nm).	Knowledge and application	1 theoretical 2 + practical	Sixth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Excimer Laser (wavelength (λ ().	Knowledge and application	1 theoretical 2 + practical	Seventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	ND-YAG Laser (Define, λ = 1064 nm).	Knowledge and application	1 theoretical 2 + practical	The eighth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Properties of Diode Laser λ =810 nm to 110 nm.	Knowledge and application	1 theoretical 2 +	Ninth

				practical	
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Properties of Diode Laser λ =810 nm to 110 nm.	Knowledge and application	1 theoretical 2 + practical	tenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Side effects of Laser eye operation.	Knowledge and application	1 theoretical 2 + practical	eleventh
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Retinal Laser treatment (Define retina with properties).	Knowledge and application	1 theoretical 2 + practical	twelfth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Argon Laser ($\lambda_{blue} = 488\,nm$ and $\lambda_{green} = 514\,nm$).	Knowledge and application	1 theoretical 2 + practical	thirteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Argon Laser ($\lambda_{blue} = 488\,nm$ and $\lambda_{green} = 514\,nm$).	Knowledge and application	1 theoretical 2 + practical	fourteenth
Reports, oral and written theoretical exams	whiteboard, powerpoint slides, hands-on experiments	Revision .	Knowledge and application	1 theoretical 2 + practical	fifteenth

Course Evaluation -11
Student activities and reports, oral and written theoretical and practical exams
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Learning and Teaching Resources - 12	
	Required textbooks (curriculum (books, if available
Internet	Main References (Sources)

	Recommended books and references (scientific journals, (...reports
	Electronic references and websites