

# Republic of Yemen

Ministry of Higher Education & Scientific Research

21 September University for Medicals & Applied Sciences



## Faculty of Medicine

Department of ophthalmology

Bachelor Program of Medicine and surgery

## Course Specification of Ophthalmology

**Course Code: (A21P513)**

2023



T4: This Template is Developed and Approved by CAQA-Yemen, 2023

|                  |                      |                    |                          |                          |  |
|------------------|----------------------|--------------------|--------------------------|--------------------------|--|
| Prepared by:     | Reviewed by:         | Head of department | Quality Unit:            | Dean of Medicine Faculty | Center of Development and Quality Assurance Dean |
| Dr. Nabil Taresh | Dr. Hesham al-akhali | Dr. Nabil Taresh   | Dr. Fadhl Shujaa Al-deen | Dr. Salwa Al-Ghomeri     |  |

## I. General Information:

|     |  |  |                      |                  |                         |          |
|-----|--|--|----------------------|------------------|-------------------------|----------|
| 1.  | Course Title:                                    | Ophthalmology                                    |                      |                  |                         |          |
| 2.  | Course Code:                                     | A21P513  |                      |                  |                         |          |
| 3.  | Credit Hours:                                    | Credit Hours                                     | Theory Contact Hours |                  | Practical Contact Hours |          |
|     |  |  | Lecture              | Tutorial/Seminar | Lab                     | Clinical |
|     |  | 3  | 2                    | --               | --                      | 3        |
| 4.  | Level/ Semester at which this Course is offered: | 5 <sup>th</sup> Level / 1 <sup>st</sup> Semester |                      |                  |                         |          |
| 5.  | Pre –Requisite (if any):                         | Introduction to Pharmacology                     |                      |                  |                         |          |
| 6.  | Co –Requisite (if any):                          | None   |                      |                  |                         |          |
| 7.  | Program (s) in which the Course is Offered:      | Bachelor of Medicine and surgery                 |                      |                  |                         |          |
| 8.  | Language of Teaching the Course:                 | English  |                      |                  |                         |          |
| 9.  | Location of Teaching the Course:                 | Faculty of Medicine                              |                      |                  |                         |          |
| 10. | Prepared by:                                     | Dr. Nabil Taresh                                 |                      |                  |                         |          |
| ١١  | Date and Number of Approval by Council:          | 2023   |                      |                  |                         |          |

## II. Course Description:

The aim of Ophthalmology course is to provide students with fundamental knowledge of basic and applied concepts related to Ophthalmology. Ophthalmology course introduces information about many topics including an overview of eye diseases and their signs and symptoms, and causes of these signs, the emergency ones. Participants should know when to send the patient to the specialists.

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| III. Course Intended Learning Outcomes (CILOs) :<br>Upon successful completion of the course, students will be able to: |  | Referenced PILOs           |    |
|---|--|----------------------------|----|
| <b>A. Knowledge and Understanding:</b>  |  | <b>I, P<br/>or<br/>M/A</b> |    |
| a1  | Describe normal ocular anatomy, normal ocular development and normal function and the changes associated with aging and disease abnormality. | I                          | A1 |
| a2  | Define the main therapeutic lines of ophthalmic health care.   | I                          | A2 |
| a3  | Identify manifestation of common ocular and disorders and ocular manifestations of the systemic disease.                                     | P                          | A3 |
| <b>B. Intellectual Skills:</b>  |  |                            |    |
| b1  | Differentiate the most important ophthalmic symptoms and signs.  | P                          | B1 |
| b2  | Interpret the basic investigations related to ophthalmic disease.  | P                          | B2 |
| b3  | Solve simple ophthalmic clinical   | P                          |    |

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|   |  |   |    |   |
|---|--|---|----|---|
|   | problems.  |   |    | management plan for common acute, chronic and urgent physical and mental health presentations.  |
| <b>C. Professional and Practical Skills:</b>                |  |   |    |   |
| c1  | Practice basic ophthalmic examination  | P | C1 | Perform complete clinical examination and precise investigations to reach the final diagnosis.  |
| c2  | Make first aids in ophthalmic emergencies  | P | C3 | Carry out routine medical procedure and demonstrate the ability of using common medical tools required for diagnosis and management with highly qualified competency                                      |
| <b>D. Transferable Skills:</b>                              |  |   |    |   |
| d1  | Establish rapport with his seniors, colleagues, and paramedical workers, so as to effectively function as a member of the eye care team. | P | D2 | D2. Work individually or in a team and develop lifelong learning using up to date technology that help in understanding the diseases and its control and prevention.                                      |
| d2  | Apply ethical principles to clinical work, such as to display patience and kindness.   | A | D3 | D3. Respect the different cultural beliefs, ethics, personalities, privacy and values for patients and community with a good behavior and follow the institutional and national roles of medical practice |
| d3  | Respect his colleagues and a commitment to cooperate with them.  | A |    |   |
| <b>I= Introduced, P=Practiced or M/A= Mastered/Advanced</b> |  |   |    |   |

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**(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:**

| Course Intended Learning Outcomes |  | Teaching Strategies  | Assessment Strategies   |
|-----------------------------------|--|--|---|
| a1                                | Describe normal ocular anatomy, normal ocular development and normal function and the changes associated with aging and disease abnormality. | <ul style="list-style-type: none"> <li>Interactive Lectures</li> <li>Discussion</li> </ul>                       | <ul style="list-style-type: none"> <li>Final written exam</li> </ul>                              |
| a2                                | Define the main therapeutic lines of ophthalmic health care.   | <ul style="list-style-type: none"> <li>Interactive Lectures</li> <li>Discussion</li> <li>Case studies</li> </ul> | <ul style="list-style-type: none"> <li>Final written exam</li> <li>Final clinical exam</li> </ul> |
| a3                                | Identify manifestation of common ocular Disorders and ocular manifestations of the systemic disease.   | <ul style="list-style-type: none"> <li>Interactive Lectures</li> <li>Discussion</li> <li>Case studies</li> </ul> | <ul style="list-style-type: none"> <li>Final written exam</li> <li>Final clinical exam</li> </ul> |

**(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:**

| Course Intended Learning Outcomes |   | Teaching Strategies  | Assessment Strategies   |
|-----------------------------------|---|--|---|
| b1                                | Differentiate the most important ophthalmic symptoms and signs.   | <ul style="list-style-type: none"> <li>Interactive Lectures</li> <li>Discussion</li> <li>Case studies</li> </ul> | <ul style="list-style-type: none"> <li>Final written exam</li> <li>Final clinical exam</li> </ul> |
| b2                                | Interpret the basic investigations related to ophthalmic disease. | <ul style="list-style-type: none"> <li>Interactive Lectures</li> <li>Discussion</li> <li>Case studies</li> </ul> | <ul style="list-style-type: none"> <li>Final written exam</li> <li>Final clinical exam</li> </ul> |
| b3                                | Solve simple ophthalmic clinical problems.                        | <ul style="list-style-type: none"> <li>Interactive Lectures</li> <li>Discussion</li> <li>Case studies</li> </ul> | <ul style="list-style-type: none"> <li>Final written exam</li> <li>Final clinical exam</li> </ul> |

**(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:**

| Course Intended Learning Outcomes |                                       | Teaching Strategies  | Assessment Strategies  |
|-----------------------------------|---------------------------------------|--|--|
| c1                                | Practice basic ophthalmic examination | <ul style="list-style-type: none"> <li>Training</li> <li>Case studies</li> </ul> | <ul style="list-style-type: none"> <li>Final clinical exam</li> <li>OSCE</li> <li>Logbook</li> </ul> |

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|  |  |   |   |
|--|--|---|---|
| c2   | Make first aids in ophthalmic emergencies  | <ul style="list-style-type: none"> <li>Training</li> <li>Case studies</li> </ul>  | <ul style="list-style-type: none"> <li>Final clinical exam</li> <li>OSCE</li> <li>Logbook</li> </ul>  |
| <b>(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:</b> |  |   |   |
| <b>Course Intended Learning Outcomes</b>   |  | <b>Teaching Strategies</b>  | <b>Assessment Strategies</b>  |
| d1   | Establish rapport with his seniors, colleagues, and paramedical workers, so as to effectively function as a member of the eye care team. | <ul style="list-style-type: none"> <li>Seminars</li> <li>Discussion</li> <li>Case studies</li> <li>Self-learning</li> </ul> | <ul style="list-style-type: none"> <li>Oral discussion</li> <li>Teamwork</li> </ul>                   |
| d2   | Apply ethical principles to clinical work, such as to display patience and kindness.   | <ul style="list-style-type: none"> <li>Seminars</li> <li>Discussion</li> <li>Case studies</li> <li>Self-learning</li> </ul> | <ul style="list-style-type: none"> <li>Oral discussion</li> <li>Homework</li> <li>Teamwork</li> </ul> |
| d3   | Respect his colleagues and a commitment to cooperate with them.  | <ul style="list-style-type: none"> <li>Seminars</li> <li>Discussion</li> <li>Case studies</li> <li>Self-learning</li> </ul> | <ul style="list-style-type: none"> <li>Oral discussion</li> <li>Homework</li> <li>Teamwork</li> </ul> |

#### IV. Course Contents:

##### A. Theoretical Aspect:

| No. | Units/Topics List                               | Topics List   | Week due        | Contact Hours | Learning Outcomes (CILOs) |
|-----|---|---|-----------------|---------------|---------------------------|
| 1   | <b>Anatomy of the eye and the visual system</b> | <ul style="list-style-type: none"> <li>Important structures of the eye.</li> <li>Describe the location and function of these structures.</li> <li>Describe the anatomy of the entire visual pathway.</li> </ul>     | 1 <sup>st</sup> | 2h            | a1                        |
| 2   | <b>Basic Eye Exam</b>                           | <ul style="list-style-type: none"> <li>Visual acuity</li> <li>Pupillary responses</li> <li>Ocular motility</li> <li>Visual fields by confrontation testing</li> <li>Intraocular pressure in the physical</li> </ul> |                 | 4h            | a3, b1, b2, d1, d2        |

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| No. | Units/Topics List                                  | Topics List   | Week due        | Contact Hours | Learning Outcomes (CILOs)  |
|-----|--|---|-----------------|---------------|----------------------------|
|     |  | <p>exam</p> <ul style="list-style-type: none"> <li>– Important structures of the anterior segment of the eye with a penlight in a systematic way</li> <li>– Fundus with either direct ophthalmoscope or fundus photography and identify the most important structures.</li> <li>– Instillation of drops</li> <li>– Ocular maneuvers.</li> </ul>   |                 |               |                            |
| 3   | <b>Evaluate A Patient with Acute Vision Loss</b>   | <ul style="list-style-type: none"> <li>– Urgency regarding the timing, severity, monocular or binocular nature, pain or redness associated with the vision loss.</li> <li>– Causes of acute vision loss.</li> <li>– Signs and symptoms of these diagnoses and generate a differential diagnosis based on the elicited history and exam.</li> <li>– Management and urgency of referral for these diagnoses.</li> </ul>   |                 | 4h            | a2, a3, b1, b2, b3,d2      |
| 4   | <b>Evaluate a patient with chronic vision loss</b> | <ul style="list-style-type: none"> <li>– history with regards to the timing, severity, monocular or binocular nature, pain or redness associated with the vision loss.</li> <li>– Causes of chronic vision loss.</li> <li>– Chronic manifestations of systemic diseases.</li> <li>– Signs and symptoms of these diagnoses and generate a differential diagnosis based on the elicited history and exam, understanding that some of these may present in an acute manner.</li> </ul> |                 | 6h            | a2, a3, b1, b2, b3, d2, d3 |
| 5   | <b>Evaluate A Patient with A Red or</b>            | <ul style="list-style-type: none"> <li>– Ocular and systemic medical history relevant to painful or red</li> </ul>  | 2 <sup>nd</sup> | 4h            | a2, a3, b1, b2,            |

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| No. | Units/Topics List  | Topics List   | Week due | Contact Hours | Learning Outcomes (CILOs)    |
|-----|--|---|----------|---------------|------------------------------|
|     | <b>Painful Eye</b>   | <ul style="list-style-type: none"> <li>eye.</li> <li>– Causes of a painful or red eye.</li> <li>– Urgent causes of a painful or red eye.</li> <li>– Signs and symptoms of these diagnoses and generate a</li> <li>– Differential diagnosis based on the elicited history and exam.</li> <li>– Management and urgency of referral for these diagnoses</li> </ul>   |          |               | b3, d2                       |
| 6   | <b>Evaluate A Patient with Eye Trauma</b>  | <ul style="list-style-type: none"> <li>– Mechanism of Eye Trauma and associated pain or vision loss.</li> <li>– Manifestations of eye trauma.</li> <li>– Signs and symptoms of these diagnoses and generate a differential diagnosis based on the elicited history and exam.</li> <li>– Management and urgency of referral for these diagnoses</li> <li>– Ruling out globe rupture before manipulating the eye.</li> </ul>  |          | 2h            | a2, a3,<br>b1, b2,<br>b3, d2 |
| 7   | <b>Evaluate A Patient with an Eye Movement Abnormality, Diplopia, or Pupillary Disorders</b> | <ul style="list-style-type: none"> <li>– Monocular and binocular diplopia.</li> <li>– Cranial nerve III, IV, and VI paresis/palsy.</li> <li>– Ptosis.</li> <li>– Manifestations of pupillary disorders.</li> <li>– Basic of the common manifestations of eye movement abnormalities.</li> <li>– Ocular manifestations of neurologic conditions.</li> <li>– Signs and symptoms of these diagnoses and generate a differential.</li> <li>– Management and urgency of</li> </ul> |          | 2h            | a2, a3,<br>b1, b2,<br>b3,d2  |

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| No.  | Units/Topics List   | Topics List  | Week due         | Contact Hours | Learning Outcomes (CILOs) |
|--|---|--|------------------|---------------|---------------------------|
|  |   | referral for these diagnoses.  |                  |               |                           |
| 8  | Evaluate pediatric ophthalmic presentations                       | <ul style="list-style-type: none"> <li>The risk factors for the development of strabismus or amblyopia in a child.</li> <li>key components of the history and physical exam including red reflex testing.</li> <li>The most important ophthalmic problems in children.</li> <li>Initial management plan, including determining if the patient requires further investigation or a referral based on the risk factors or the clinical findings.</li> <li>Counsel parents about the need for timely referral to manage ocular issues.</li> </ul> |                  | 2h            | a2, a3, b1, b2, b3, d2    |
| 9  | Ocular Pharmacology   | <ul style="list-style-type: none"> <li>Ocular side effects of systemic drugs.</li> <li>Ocular medications that can have systemic side effects and contraindications.</li> </ul>  |                  | 2h            | a2, b3                    |
| 10   | Evaluate a patient with ocular manifestations of systemic disease | <ul style="list-style-type: none"> <li>The ocular manifestations of systemic diseases.</li> <li>The initial management and urgency of referral for these diagnoses.</li> </ul>   |                  | 2h            | a2, a3, b2, b3, d2        |
| 11   | Final Theoretical Exam  |  | 16 <sup>th</sup> | 2h            | a1, a2, a3, b1, b2, b3    |
| <b>Number of Weeks /and Units Per Semester</b> |   |  | <b>16</b>        | <b>32</b>     |                           |

### B. Practical Aspect (Lab/Clinical) (if any):

|                  |                      |                    |                          |                          |  |
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| No.  | Tasks/ Experiments   | Week due to                         | Contact Hours | Learning Outcomes (CILOs) |
|--|--|-------------------------------------|---------------|---------------------------|
| 1  | - Measure and record visual acuity.  | 1 <sup>st</sup>                     | 6             | b1, b2, c1, c2, d1. d2    |
| 2  | - Examine pupillary responses and ocular motility  | 1 <sup>st</sup>                     | 3             | b1, c1, c2, d1. d2        |
| 3  | - Assess visual fields by confrontation testing.   | 1 <sup>st</sup>                     | 3             | b1, b3, c1, c2, d1. d2    |
| 4  | - Role of intraocular pressure in the physical exam  | 1 <sup>st</sup>                     | 3             | c1, c2, d1. d2            |
| 5  | - Examine the important structures of the anterior segment of the eye with a penlight in a systematic way.               | 1 <sup>st</sup> and 2 <sup>nd</sup> | 9             | b1, c1, c2, d1. d2        |
| 6  | - Examine the fundus with either direct ophthalmoscope or fundus photography and identify the most important structures. | 2 <sup>nd</sup>                     | 9             | b1, c1, c2, d1. d2        |
| 7  | - Ocular maneuvers (Lid eversion and Ocular Irrigation).   | 2 <sup>nd</sup>                     | 3             | b3, c1, c2, d1. d2        |
| <b>Number of Weeks /and Units Per Semester</b> |  | <b>12</b>                           | <b>36</b>     | <b>b1, b2, b3, c1, c2</b> |

## V. Teaching Strategies of the Course:

- Lectures
- Discussion
- Clinical training
- Self-Learning
- Seminars
- Case studies
- PBL

## VI. Assessment Methods of the Course:

- Final Written Exam

|                  |                      |                    |                          |                          |  |
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- Final clinical exam
- Logbook
- OSCE
- Oral discussion
- Teamwork

### VIII. Schedule of Assessment Tasks for Students During the Semester:

| No.          | Assessment Method                         | Week Due         | Mark       | Proportion of Final Assessment | Aligned Course Learning Outcomes      |
|--------------|---|------------------|------------|--------------------------------|---------------------------------------|
| 1            | Logbook                                   | 2 <sup>nd</sup>  | 15         | 15%                            | c1, c2                                |
| 2            | Teamwork                                  | 14 <sup>th</sup> | 5          | 5%                             | d1,d2,d3                              |
| 3            | Final Practical Exam Clinical & Oral Exam | 15 <sup>th</sup> | 30         | 30%                            | c1, c2                                |
| 4            | Final Theoretical Exam & OSCE             | 16 <sup>th</sup> | 50         | 50%                            | a1, a2, a3, b1, b2, b3,c1, c2, d2, d3 |
| <b>Total</b> |   |                  | <b>100</b> | <b>100%</b>                    |                                       |

### IX. Learning Resources:

#### 1- Required Textbook(s):

- 1- Bruce James, Anthony Bron, and Manoj V. Parulekar, 2017. Ophthalmology (Lecture Notes) 12<sup>th</sup> ed, Wiley-Blackwell.
- 2- Basic Ophthalmology (American Academy of Ophthalmology 6102-6102 ).

#### 2- Essential References:

- 1- Clinical Ophthalmology (Jack J. Kanski, Butterworth Heinemann) (2016).
- 2- Ophthalmology at Glance. (2015)

#### 3- Electronic Materials and Web Sites etc.:

##### Websites:

- 1- <http://www.icoph.org>.
- 2- <http://www.atlasophthalmology.com>

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- 3- <http://www.djo.harvard.edu>
- 4- <http://www.mrcophth.com>.
- 5- Archives of Ophthalmology.

**Journals:**

- 1- American J of Ophthalmology.
- 2- The digital journal of ophthalmology(www.djo.harvard.edu),
- 3- Wills Eye Hospital (www.willseye.org)

**X. Course Policies: (Based on the Uniform Students' By law (2007))**

|          |  |
|----------|--|
| <b>1</b> | <b>Class Attendance:</b><br>Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.  |
| <b>2</b> | <b>Tardiness:</b><br>A student will be considered late if he/she is not in class after 10 minutes of the start time of class.  |
| <b>3</b> | <b>Exam Attendance/Punctuality:</b><br>No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.  |
| <b>4</b> | <b>Assignments &amp; Projects:</b><br>Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.   |
| <b>5</b> | <b>Cheating:</b><br>Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.  |
| <b>6</b> | <b>Forgery and Impersonation:</b><br>Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply. |
| <b>7</b> | <b>Other policies:</b><br>The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.                                     |

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Faculty of Medicine  
Department of Ophthalmology  
Unit of Development & Quality assurance



الجمهورية اليمنية  
وزارة التعليم العالي والبحث العلمي  
جامعة ٢١ سبتمبر للعلوم الطبية والتطبيقية  
كلية الطب  
قسم: العيون  
وحدة التطوير وضمان الجودة

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Faculty of Medicine  
Department of Ophthalmology  
Unit of Development & Quality assurance



الجمهورية اليمنية  
وزارة التعليم العالي والبحث العلمي  
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كلية الطب  
قسم: العيون  
وحدة التطوير وضمان الجودة

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| Prepared by:     | Reviewed by:         | Head of department | Quality Unit:            | Dean of Medicine Faculty | Center of Development and Quality Assurance Dean |
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Republic of Yemen  
Ministry of Higher Education & Scientific Research  
**21 SEPTEMBER UMAS**  
Faculty of Medicine  
Department of Ophthalmology  
Unit of Development & Quality assurance



الجمهورية اليمنية  
وزارة التعليم العالي والبحث العلمي  
جامعة ٢١ سبتمبر للعلوم الطبية والتطبيقية  
كلية الطب  
قسم: العيون  
وحدة التطوير وضمان الجودة

|                  |                      |                    |                          |                          |  |
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## Faculty of Medicine

### Department of Ophthalmology

#### Bachelor Program of medical students

## Course Plan (Syllabus) of Ophthalmology

### Course Code. A21P513

| I. Information about Faculty Member Responsible for the Course: |  |              |     |     |     |     |     |
|---|--|--------------|-----|-----|-----|-----|-----|
| Name of Faculty Member:   | Dr, Nabil Tarsh  | Office Hours |     |     |     |     |     |
| Location & Telephone No.:                                       | 777068997  |              |     |     |     |     |     |
| E-mail:   | <a href="mailto:Dr.nabilr@yahoo.com">Dr.nabilr@yahoo.com</a> | SAT          | SUN | MON | TUE | WED | THU |

2023

|                  |                      |                    |                          |                          |  |
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| I. General Information: |  |  |                      |                  |                         |          |
|-------------------------|--|--|----------------------|------------------|-------------------------|----------|
| 1.                      | Course Title:                                    | Ophthalmology                                    |                      |                  |                         |          |
| 2.                      | Course Code:                                     | A21P513  |                      |                  |                         |          |
| 3.                      | Credit Hours:                                    | Credit Hours                                     | Theory Contact Hours |                  | Practical Contact Hours |          |
|                         |  |  | Lecture              | Tutorial/Seminar | Lab                     | Clinical |
|                         |  | 3  | 2                    | --               | --                      | --       |
| 4.                      | Level/ Semester at which this Course is offered: | 5 <sup>th</sup> Level / 1 <sup>st</sup> Semester |                      |                  |                         |          |
| 5.                      | Pre –Requisite (if any):                         | Anatomy, physiology, and pathology               |                      |                  |                         |          |
| 6.                      | Co –Requisite (if any):                          | Introduction to Pharmacology                     |                      |                  |                         |          |
| 7.                      | Program (s) in which the Course is Offered:      | Bachelor of Medicine and surgery                 |                      |                  |                         |          |
| 8.                      | Language of Teaching the Course:                 | English  |                      |                  |                         |          |
| 9.                      | Location of Teaching the Course:                 | Faculty of Medicine                              |                      |                  |                         |          |
| 10.                     | Prepared by:                                     | Dr. Nabil Taresh                                 |                      |                  |                         |          |
| ١١                      | Date and Number of Approval by Council:          | 2023   |                      |                  |                         |          |

The aim of Ophthalmology course is to provide students with fundamental knowledge of basic and applied concepts related to Ophthalmology. Ophthalmology course introduces information about many topics including an overview of eye diseases and their signs and symptoms, and causes of these signs, the emergency ones. Participants should know when to send the patient to the specialists.

|                  |                      |                    |                          |                          |  |
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| A. Knowledge and Understanding:                             |  |
|---|--|
| a1  | Describe normal ocular anatomy, normal ocular development and normal function and the changes associated with aging and disease abnormality. |
| a2  | Define the main therapeutic lines of ophthalmic health care.   |
| a3  | Identify manifestation of common ocular and disorders and ocular manifestations of the systemic disease.                                     |
| B. Intellectual Skills:                                     |  |
| b1  | Differentiate the most important ophthalmic symptoms and signs.  |
| b2  | Interpret the basic investigations related to ophthalmic disease.  |
| b3  | Solve simple ophthalmic clinical problems.   |
| C. Professional and Practical Skills:                       |  |
| c1  | Practice basic ophthalmic examination  |
| c2  | Make first aids in ophthalmic emergencies  |
| D. Transferable Skills:                                     |  |
| d1  | Establish rapport with his seniors, colleagues, and paramedical workers, so as to effectively function as a member of the eye care team.     |
| d2  | Apply ethical principles to clinical work, such as to display patience and kindness.   |
| d3  | Respect his colleagues and a commitment to cooperate with them.  |
| <b>I= Introduced, P=Practiced or M/A= Mastered/Advanced</b> |  |

| No. | Units/Topics List | Topics List | Week due | Contact Hours |
|-----|-------------------|-------------|----------|---------------|
|-----|-------------------|-------------|----------|---------------|

|                  |                      |                    |                          |                          |  |
|------------------|----------------------|--------------------|--------------------------|--------------------------|--|
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| No. | Units/Topics List                                  | Topics List   | Week due        | Contact Hours |
|-----|--|---|-----------------|---------------|
| 1   | <b>Anatomy of the eye and the visual system</b>    | <ul style="list-style-type: none"> <li>– Important structures of the eye.</li> <li>– Describe the location and function of these structures.</li> <li>– Describe the anatomy of the entire visual pathway.</li> </ul>   | 1 <sup>st</sup> | 2h            |
| 2   | <b>Basic Eye Exam</b>                              | <ul style="list-style-type: none"> <li>– Visual acuity</li> <li>– Pupillary responses</li> <li>– Ocular motility</li> <li>– Visual fields by confrontation testing</li> <li>– Intraocular pressure in the physical exam</li> <li>– Important structures of the anterior segment of the eye with a penlight in a systematic way</li> <li>– Fundus with either direct ophthalmoscope or fundus photography and identify the most important structures.</li> <li>– Instillation of drops</li> <li>– Ocular maneuvers.</li> </ul> |                 | 4h            |
| 3   | <b>Evaluate A Patient with Acute Vision Loss</b>   | <ul style="list-style-type: none"> <li>– Urgency regarding the timing, severity, monocular or binocular nature, pain or redness associated with the vision loss.</li> <li>– Causes of acute vision loss.</li> <li>– Signs and symptoms of these diagnoses and generate a differential diagnosis based on the elicited history and exam.</li> <li>– Management and urgency of referral for these diagnoses.</li> </ul>   |                 | 4h            |
| 4   | <b>Evaluate a patient with chronic vision loss</b> | <ul style="list-style-type: none"> <li>– history with regards to the timing, severity, monocular or binocular nature, pain or redness associated with the vision loss.</li> <li>– Causes of chronic vision loss.</li> <li>– Chronic manifestations of systemic</li> </ul>   |                 | 6h            |

|                  |                      |                    |                          |                          |  |
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| No. | Units/Topics List  | Topics List  | Week due        | Contact Hours |
|-----|--|--|-----------------|---------------|
|     |  | diseases.<br>– Signs and symptoms of these diagnoses and generate a differential diagnosis based on the elicited history and exam, understanding that some of these may present in an acute manner.  |                 |               |
| 5   | <b>Evaluate A Patient with A Red or Painful Eye</b>  | – Ocular and systemic medical history relevant to painful or red eye.<br>– Causes of a painful or red eye.<br>– Urgent causes of a painful or red eye.<br>– Signs and symptoms of these diagnoses and generate a<br>– Differential diagnosis based on the elicited history and exam.<br>– Management and urgency of referral for these diagnoses |                 | 4h            |
| 6   | <b>Evaluate A Patient with Eye Trauma</b>  | – Mechanism of Eye Trauma and associated pain or vision loss.<br>– Manifestations of eye trauma.<br>– Signs and symptoms of these diagnoses and generate a differential diagnosis based on the elicited history and exam.<br>– Management and urgency of referral for these diagnoses<br>– Ruling out globe rupture before manipulating the eye. | 2 <sup>nd</sup> | 2h            |
| 7   | <b>Evaluate A Patient with an Eye Movement Abnormality, Diplopia, or Pupillary Disorders</b> | – Monocular and binocular diplopia.<br>– Cranial nerve III, IV, and VI palsy/palsy.<br>– Ptosis.<br>– Manifestations of pupillary disorders.<br>– Basic of the common manifestations of eye movement abnormalities.<br>– Ocular manifestations of neurologic conditions.<br>– Signs and symptoms of these diagnoses                              |                 | 2h            |

|                  |                      |                    |                          |                          |  |
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| No.  | Units/Topics List   | Topics List  | Week due         | Contact Hours |
|--|---|--|------------------|---------------|
|  |   | and generate a differential.<br>– Management and urgency of referral for these diagnoses.  |                  |               |
| 8  | Evaluate pediatric ophthalmic presentations                       | – The risk factors for the development of strabismus or amblyopia in a child.<br>– key components of the history and physical exam including red reflex testing.<br>– The most important ophthalmic problems in children.<br>– Initial management plan, including determining if the patient requires further investigation or a referral based on the risk factors or the clinical findings.<br>– Counsel parents about the need for timely referral to manage ocular issues. |                  | 2h            |
| 9  | Ocular Pharmacology   | – Ocular side effects of systemic drugs.<br>– Ocular medications that can have systemic side effects and contraindications.  |                  | 2h            |
| 10   | Evaluate a patient with ocular manifestations of systemic disease | – The ocular manifestations of systemic diseases.<br>– The initial management and urgency of referral for these diagnoses.   |                  | 2h            |
| 11   | Final Theoretical Exam  |  | 16 <sup>th</sup> | 2h            |
| <b>Number of Weeks /and Units Per Semester</b> |   |  | <b>16</b>        | <b>32</b>     |

**B. Practical Aspect (Lab/Clinical) (if any):**

| No. | Tasks/ Experiments                  | Week due to     | Contact Hours |
|-----|-------------------------------------|-----------------|---------------|
| 1   | – Measure and record visual acuity. | 1 <sup>st</sup> | 6             |

|                  |                      |                    |                          |                          |  |
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| No.  | Tasks/ Experiments   | Week due to                         | Contact Hours |
|--|--|-------------------------------------|---------------|
| 2  | - Examine pupillary responses and ocular motility  | 1 <sup>st</sup>                     | 3             |
| 3  | - Assess visual fields by confrontation testing.   | 1 <sup>st</sup>                     | 3             |
| 4  | - Role of intraocular pressure in the physical exam  | 1 <sup>st</sup>                     | 3             |
| 5  | - Examine the important structures of the anterior segment of the eye with a penlight in a systematic way.               | 1 <sup>st</sup> and 2 <sup>nd</sup> | 9             |
| 6  | - Examine the fundus with either direct ophthalmoscope or fundus photography and identify the most important structures. | 2 <sup>nd</sup>                     | 9             |
| 7  | - Ocular maneuvers (Lid eversion and Ocular Irrigation).   | 2 <sup>nd</sup>                     | 3             |
| <b>Number of Weeks /and Units Per Semester</b> |  | <b>12</b>                           | <b>36</b>     |

## V. Teaching Strategies of the Course:

- Lectures
- Discussion
- Clinical training
- Self -Learning
- Seminars
- Case studies
- PBL

## VI. Assessment Methods of the Course:

- Final Written Exam
- Final clinical exam
- Logbook
- OSCE
- Oral discussion
- Teamwork

## VIII. Schedule of Assessment Tasks for Students During the Semester:

|                  |                      |                    |                          |                          |  |
|------------------|----------------------|--------------------|--------------------------|--------------------------|--|
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| No.   | Assessment Method                         | Week Due         | Mark | Proportion of Final Assessment |
|-------|---|------------------|------|--------------------------------|
| 1     | Logbook                                   | 2 <sup>nd</sup>  | 15   | 15%                            |
| 2     | Teamwork                                  | 14 <sup>th</sup> | 5    | 5%                             |
| 3     | Final Practical Exam Clinical & Oral Exam | 15 <sup>th</sup> | 30   | 30%                            |
| 4     | Final Theoretical Exam & OSCE             | 16 <sup>th</sup> | 50   | 50%                            |
| Total |   |                  | 100  | 100%                           |

## IX. Learning Resources:

### 1- Required Textbook(s):

- 4- Bruce James, Anthony Bron, and Manoj V. Parulekar, 2017. Ophthalmology (Lecture Notes) 12<sup>th</sup> ed, Wiley-Blackwell.
- 5- Basic Ophthalmology (American Academy of Ophthalmology 6102-6102 ).

### 2- Essential References:

- 6- Clinical Ophthalmology (Jack J. Kanski, Butterworth Heinemann) (2016).
- 7- Ophthalmology at Glance. (2015)

### 3- Electronic Materials and Web Sites etc.:

#### Websites:

- 8- <http://www.icoph.org>.
- 9- <http://www.atlasophthalmology.com>
- 10- <http://www.djo.harvard.edu>
- 11- <http://www.mrcophth.com>.
- 12- [Archives of Ophthalmology](#).

#### Journals:

- 13- American J of Ophthalmology.
- 14- The digital journal of ophthalmology([www.djo.harvard.edu](http://www.djo.harvard.edu)),
- 15- Wills Eye Hospital ([www.willseye.org](http://www.willseye.org))

## X. Course Policies: (Based on the Uniform Students' By law (2007)

|                  |                      |                    |                          |                          |  |
|------------------|----------------------|--------------------|--------------------------|--------------------------|--|
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|   |  |
|---|--|
| 1 | <b>Class Attendance:</b><br>Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.  |
| 2 | <b>Tardiness:</b><br>A student will be considered late if he/she is not in class after 10 minutes of the start time of class.  |
| 3 | <b>Exam Attendance/Punctuality:</b><br>No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.  |
| 4 | <b>Assignments &amp; Projects:</b><br>Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.   |
| 5 | <b>Cheating:</b><br>Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.  |
| 6 | <b>Forgery and Impersonation:</b><br>Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply. |
| 7 | <b>Other policies:</b><br>The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.                                     |

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