UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title	Ocular Health Assessment 1
Module Code	OPT4012-D
Academic Year	2021/2
Credits	40
School	School of Optometry and Vision Science
FHEQ Level	FHEQ Level 4

Contact Hours	
Type	Hours
Lectures	24
Tutorials	24
Practical Classes or Workshops	24
Directed Study	304
Online Lecture (Asynchronous)	24

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Academic Year

Module Aims

To stimulate a broad understanding of anatomical & functional relationships between the eye, the brain, & their supporting structures.

To develop knowledge of anatomy, physiology & immunology & their relationships to body systems including the eye.

To develop knowledge of microbial causes of infection/disease & the ways in which they are diagnosed & controlled.

To provide students with an introduction to the major classes of physiologically important molecules; & to introduce the function of such molecules in living cells & tissues, including the eye and related organs.

To outline the salient features of ophthalmic instrument design and to enable students to competently use clinical ophthalmic instruments as part of the optometrist's role of assessing ocular health.

Outline Syllabus

Anatomical & Physiological systems. Histology of tissues. Cellular functions. Nerve & muscle physiology and neuromuscular transmission. The cardiovascular system & blood. Principles of neurotransmission. Sensory receptors. Anatomy & physiology of the autonomic nervous system. Overview of drug metabolism, overview of integration of metabolism.

Anatomy and physiology of the endocrine system.

Functioning of the immune system

Microbiology:
Overview of the microbial world. Structure & function of microbes & their nutritional & physiological requirements. The role of the human commensal microflora. Introduction to microbial disease. Infections of the eye.

Biochemistry:
Basic structural & functional features of lipids, amino acids, proteins, carbohydrates, nucleotides and nucleic acids. Introduction to enzymes. Lipid & carbohydrate metabolism
Ocular surface (cornea, sclera, conjunctiva). Vascular structures (choroid, ciliary body, iris). Aqueous humour (formation, flow and drainage). Crystalline lens. Control of pupil & accommodation. Neural structures (retina, optic nerve). Octonometry (primarily non-contact); visual pathway assessment (perimetry, pupils).

The portfolio includes a completed record of studies in ocular anatomy & physiology & the development of practical skills in the techniques of slit lamp, indirect ophthalmoscopy, non-contact tonometry and perimetry.

Learning Outcomes	
Outcome Number	Description
01	Describe the anatomy of the normal eye and explain its relationship to the brain.
02	Understand the design of ophthalmic instruments.
03	Explain the role of instrumentation for the examination of visual and ocular health.
04	Outline the anatomy and physiology of body systems including the eye in relation to health and disease.
05	Discuss microbial diversity and describe representative species of bacteria, viruses, fungi and parasites of medical importance.
06	Outline how micro-organisms, by their growth and activities, impact on human health.
07	Outline the structure, function and chemical interactions of biologically relevant molecules and their relationship with disease.
08	Recognise the fundamental anatomical and physiological substrates underlying ocular pathology.
09	Describe the information gained from the use of commonly used ophthalmic instruments.
10	Examine a patient`s eyes in a safe systematic manner with a selection of instruments.
11	Work together in small teams or with a partner.
12	Begin to develop communication skills.
13	Demonstrate teamwork skills through completion of lab work in pairs or small groups.
14	Improve own learning & performance through reading course notes & preparing laboratory reports.

Learning, Teaching and Assessment Strategy

The module is based on a lecture series, team-based learning activities and practical classes supported by online multimedia material.
1. The fundamental principles relating to the instruments and techniques used to assess ocular health and the anatomical and functional relationships between the eye, the brain, and their supporting structures are covered in formal lectures.
2. Practical classes are used to develop basic skills and assess competence in fundamental clinical examination techniques.
3. Practical laboratory sessions are designed to provide visual clarification of the information provided in lectures.
4. Basic anatomy, physiology, biochemistry and microbiology material will be provided via directed study of a series of online resources supported by optional tutorial sessions
5. Additional directed study will be based on recommended texts.

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Computerised examination	Closed book computerised exam at the end of the module (3 Hrs)	80%
Summative	Clinical Assessment	Assessment in a range of basic practical skills covered in syllabus (2 Hrs)	20%
Summative	Clinical Assessment	Demonstration of baseline competency at clinical skills - PASS/FAIL	0%
Summative	Examination - Open Book	Demonstration of baseline competency at basic anatomy, physiology, biochem & microbiol - PASS/FAIL	0%

Reading List
To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

Please note:
This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

---

https://bradford.ac.uk