# Syllabus: General Anatomy (111501104)
## Second Semester
## 2023/2024

## COURSE INFORMATION

| | |
|---|---|
| Course Name | General Anatomy |
| Semester | Second |
| Department | Department of Anatomy, Histology, Physiology & Biochemistry |
| Faculty | Medicine |

| | |
|---|---|
| Course Code | 111501104 |
| Section | General Subjects |
| Core Curriculum | MD Program |
| Credit Hours | 3 |
| Prerequisites | None |
| Classroom | 301 & 302 |

**Day(s) and Time(s):**

| | | | | |
|---|---|---|---|---|
| Sunday | A | Anatomy Lab (A1+A2) 12.30-1.30 | Anatomy Lab (A3+A4+5) 1.30-2.30 | |
| | B | - | - | |
| Tuesday | A | Anatomy Lect. 9.30-10.30 | - | |
| | B | Anatomy Lect. 10.30-11.30 | Anatomy Lab (A1+A2) 12.30-1.30 | Anatomy Lab (A3+A4+5) 1.30-2.30 |
| Thursday | A | Anatomy Lect. 10.30-11.30 | - | - |
| | B | Anatomy Lect. 9.30-10.30 | - | - |

## COURSE DESCRIPTION

**1. The course begins with understanding; the definition and significance of anatomy and its subdivisions; the term of position and movements; and the regional term applied in the study of human gross anatomy.**
**2. The course introduces the basic structures encountered while dissecting a cadaver (skin, fascia, skeletal muscles, bones, joints, blood & lymphatic vessels, nervous system organization).**
**3. The course covers the main structures and functions of different body system; (Skeletal, muscular & Joints, CVS, Respiratory, GIT, Urinary, Male and Female Genital, and Nervous System).**

**4. The course covers the general embryology, which describe the development of embryo, fetal membrane, placenta and the causes of congenital malformations.**

## DELIVERY METHODS

**The course will be delivered through a combination of active learning strategies. These will include:**

- **PowerPoint lectures and active classroom based discussion**
- **Collaborative learning through small groups acting in an interdisciplinary context.**
- **Relevant films and documentaries.**
- **Video lectures.**
- **E-learning resources: e-reading assignments and practice quizzes through Model and Microsoft Team.**
- **Lab sessions in the dissecting room showing plastinated models.**

## FACULTY INFORMATION

| | |
|---|---|
| **Course coordinator:** | |
| **Name** | **Dr. Mohamed Fathi Mohamed Mohamed Elrefai** |
| **Academic Title:** | **Ass. Professor of Anatomy and Embryology** |
| **Office Location:** | **3018, College of medicine, Hashemite University** |
| **Telephone Number:** | **5604** |
| **Email Address:** | mohamed@hu.edu.jo |
| **Office Hours:** | **Sunday: 11-1**<br>**Tuesday: 11.00-1.00** |
| **Instructors** | |
| **Name**<br>**Academic title**<br>**Office location**<br>**Email**<br>**Office hours** | **Mohamed Fathi Elrefai**<br>**Assistant professor of Anatomy & Embryology**<br>**3018, 3rd floor, Ibn Sina Medical Faculties complex**<br>**mohamed@hu.edu.jo**<br>**Sunday:11-1, Tuesday: 11-1** |
| **Name**<br>**Academic title**<br>**Office location**<br>**Email**<br>**Office hours** | **Ashraf Sadek**<br>**Assistant professor of Anatomy& Embryology**<br>**3031, 3rd floor, Ibn Sina Medical Faculties complex**<br>**Ashrafm@hu.edu.jo**<br>**Sunday:11-1, Tuesday: 11-1** |
| **Name**<br>**Academic title**<br>**Office location**<br>**Email**<br>**Office hours** | **Amani Allam**<br>**Assistant professor of Anatomy& Embryology**<br>**1031, 1st floor, Ibn Sina Medical Faculties complex**<br>**Amany@hu.edu.jo**<br>**Sunday:11-1, Tuesday: 11-1** |
| **Name** | **Mustafa Salman** |

| | |
|---|---|
| **Academic title** | **Lecturer of Anatomy** |
| **Office location** | **3019, 3rd floor, Ibn Sina Medical Faculties complex** |
| **Email** | **Mustafas@hu.edu.jo** |
| **Office hours** | **Sunday: 11.30-1.30, Tuesday: 11.30-1.30** |

## REFERENCESAND LEARNINGRESOURCES

| Text Books | Authors | Edition |
|---|---|---|
| Grey's anatomy for students | Richard Drake | 4th |
| Principles of Human Anatomy. | Gerard J. Tortora, Mark Nilsen | 14th |
| Clinical Anatomy for Medical Students | Richard S Snell | 5th |
| Before we are birth | K.L. Moore and T.V.N. Persaud, | 10th |
| Atlas of Human Anatomy | Frank H. Netter | Last edition |

## STUDENT LEARNING OUTCOMES MATRIX*

| Program Learning Outcomes | Course Objectives | Course Student Learning Outcomes | Assessment Method |
|---|---|---|---|
| MD Program learning outcomes | Introduction to Human Anatomy | 1. Anatomical position.<br>2. Body planes, terms of position, and regional terms.<br>3. Body cavity. Subdivision & contents.<br>4. Levels of organization. | • Exams<br>• Quizzes<br>• "On-line' reading assignments |
| | Axial Skeleton I: The Skull | 1. Outline the bones of axial skeleton.<br>2. Describe the general features of skull.<br>3. Introduce the bones of skull; sutures, fontanels & their significances.<br>4. Describe briefly the cranial cavity and base of skull.<br>5. Outline important foramens of skull. | • Exams<br>• Quizzes<br>• "On-line' reading assignments |
| | Axial Skeleton II: Mandible, Vertebral Column, Sternum and Ribs | 1. Describe the features of mandible.<br>2. Describe the general features of vertebral column.<br>3. Describe the structure and significance of inter- vertebral discs.<br>4. Outline the typical parts of the vertebra.<br>5. Describe briefly main features of regional vertebrae, sacrum & coccyx.<br>6. Describe briefly the sternum and ribs. | • Exams<br>• Quizzes<br>• "On-line' reading assignments |

| | | | |
|---|---|---|---|
| | **Appendicular Skeleton I: Bones of Upper Limb** | **1. Outline the bones of upper limb.**<br>**2. Describe the main features of clavicle, scapula & humerus.**<br>**3. Describe the features of ulna & radius.**<br>**4. Outline the general features and name of carpal bones.**<br>**5. Describe the features of metacarpal bones and phalanges.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Appendicular Skeleton II: Bones of Lower Limb** | **1. Outline the bones of lower limb.**<br>**2. Describe the main features of bones of hip: ilium, ischium, & pubis.**<br>**3. Describe the main features of femur & patella.**<br>**4. Describe the features of tibia & fibula.**<br>**5. Outline bones of foot and arches of foot.** | •<br>• **" Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Muscular System** | **1. Outline the types of skeletal muscle.**<br>**2. Outline the nomenclature of skeletal muscles.**<br>**3. Outline the type of actions of skeletal muscles.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Muscles of Scalp, Face, & Eye** | **1. Outline the muscles of scalp & face.**<br>**2. Outline the muscles of mastication.**<br>**3. Outline the extra-ocular muscles of eye.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Muscles of the Neck** | **1. Outline the main muscles of neck.**<br>**2. Outline the muscles of pharynx & larynx.**<br>**3. Outline the prevertebral muscles of neck.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Muscles of Thoracic, abdominal & Pelvic Walls** | **1. Outline the muscles of thoracic wall.**<br>**2. Describe the diaphragm.**<br>**3. Outline the muscles of anterior abdominal wall.**<br>**4. Describe briefly the perineum.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Muscles of upper Limb** | **1. Outline the main muscles of pectoral, shoulder, and scapular region.**<br>**2. Outline the muscles of arm, forearm, & hand.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Muscles of lower Limb** | **1. Outline the muscles of the gluteal region & back of thigh.**<br>**2. Outline the muscles of anterior & lateral compartment of thigh.**<br>**3. Outline the muscles of leg.**<br>**4. Describe the popliteal fossa.**<br>**5. Outline the muscles of foot.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Body Joints** | **1. Outline the type of body joints.**<br>**2. Outline the structure and types of synovial joints.**<br>**3. Outline the joints of upper limb (shoulder, elbow, radio-ulnar, wrist, and joints of hand).**<br>**4. Outline the joints of lower limb (hip, knee. ankle, and joints of foot).** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | | **1. Outline the parts of circulatory system.** | • **Exams** |

| | | | |
|---|---|---|---|
| | **Circulatory System I** | **2. Briefly describe the pericardium.**<br>**3. Briefly describe the heart (location, chambers, valves, blood supply).** | • **Quizzes**<br>• **"On-line' reading assignments** |
| | **Circulatory System II** | **1. Outline the great vessels of heart.**<br>**2. Outline the branches of aorta.**<br>**3. Outline the vessels of head & neck.**<br>**4. Outline the blood vessels of upper & lower limbs.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Respiratory System I** | **1. Outline the parts of respiratory system.**<br>**2. Outline the structure of nasal cavity, nasopharynx, paranasal sinuses.**<br>**3. Outline the larynx.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Respiratory System II** | **1. Describe briefly the trachea & bronchi.**<br>**2. Describe briefly the pleural sac.**<br>**3. Describe briefly the lungs.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Digestive System I** | **1. Outline the parts of digestive system.**<br>**2. Describe briefly the mouth & oesophagus.**<br>**3. Outline the location, parts, openings, and borders of stomach, & peritoneal folds.**<br>**4. Introduce parts & functions of small bowel.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Digestive System II** | **1. Outline the parts, location and function of large intestine.**<br>**2. Outline the associated digestive glands (salivary glands, pancreas, liver & gall bladder and their functions).** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Urinary System** | **1. Outline parts of urinary system.**<br>**2. Briefly describe the location, gross structure & blood vessels of kidney.**<br>**3. Briefly outline the ureter, urinary bladder & male & female urethra.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Male Genital System** | **Outline the parts & functions of male genital system.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Female Genital System** | **Outline the parts & functions of female genital system.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Nervous System I: The cerebral hemisphere** | **1. Outline the anatomical and functional parts of NS.**<br>**2. Outline the parts of CNS (brain & spinal cord).**<br>**3. Outline the meninges & ventricles of brain.**<br>**4. Outline the lobes & functions of cerebral hemisphere.**<br>**5. Outline the sulci, gyri & important functional areas.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |

| | | | |
|---|---|---|---|
| | | **6. Outline the other part of brain (thalamus, hypothalamus, midbrain, pons, medulla oblongata & cerebellum).** | |
| | **Nervous System II: The spinal cord** | **1. Outline the general features of the spinal cord.**<br>**2. Outline its meninges.**<br>**3. Discuss the CSF and outline its function.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **Nervous System III: The brain stem** | **1. Outline the morphology of the medulla oblongata.**<br>**2. Outline the morphology of the pons.**<br>**3. Outline the morphology of the midbrain.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **General Embryology I** | **1. Embryological terms (sperm, Oocyte, embryo, Zygote, implantation, Conception, blastomeres, Morula, blastocyst, Conceptus primordium, Fetus, abortion, labour).**<br>**2. Outline the process of spermatogenesis.**<br>**3. Outline the process of Oogenesis.**<br>**4. Describe the process of fertilization.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **General Embryology II** | **1. Describe zygote cleavage, formation of blastocyst & implantation (1st week of development).**<br>**2. Describe the 2nd week of development.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |
| | **General Embryology III** | **1. Describe briefly the 3rd week of development of embryo.**<br>**2. Describe briefly the development of embryo from 4th – 8th weeks.**<br>**3. Describe fetal membranes & placenta.**<br>**4. Describe causes of congenital anomalies.**<br>**5. Outline procedures & techniques used to assess fetal status.** | • **Exams**<br>• **Quizzes**<br>• **"On-line' reading assignments** |

## ACADEMIC SUPPORT

**It is The Hashemite University policy to provide educational opportunities that ensure fair, appropriate and reasonable accommodation to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their Instructor to ensure that their individual needs are met. The University through its Special Need section will exert all efforts to accommodate for individual's needs.**
**Special Needs Section: Student Services and Care Unit**
**Tel: 053903333 ext. 4132 / 4583 / 5023**
**Location: Deanship of Students Affairs**
**Email: stydent@hu.edu.jo**

## COURSE REGULATIONS

***Participation***
**Class participation and attendance are important elements of every student's learning experience at The Hashemite University, and the student is expected to attend all classes. A student should not miss more than 15% of the classes during a semester. *Those exceeding this limit of 15% will receive a failing grade regardless of their performance*. It is a student's responsibility to monitor the frequency of their own absences. Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration. It is a student's responsibility to sign-in; failure to do so will result in a non-attendance being recorded.**

**In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course.**

***Plagiarism***

**Plagiarism is considered a serious academic offence and can result in your work losing marks or being failed. HU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a student is expected not to engage in behaviours that compromise his/her own integrity as well as that of the Hashemite University.**

**Plagiarism includes the following examples and it applies to all student assignments or submitted work:**

- **Use of the work, ideas, images or words of someone else without his/her permission or reference to them.**
- **Use of someone else's wording, name, phrase, sentence, paragraph or essay without using quotation marks.**
- **Misrepresentation of the sources that were used.**

**<u>The instructor has the right to fail the coursework or deduct marks where plagiarism is detected</u>**

***Late or Missed Assignments***

**In all cases of assessment, students who fails to attend an exam, class project or deliver a presentation on the scheduled date without prior permission, and/or are unable to provide a medical note, will automatically receive a fail grade for this part of the assessment.**

- **Submitting a term paper on time is a key part of the assessment process. Students who fail to submit their work by the deadline specified will automatically receive a 10% penalty. Assignments handed in more than 24 hours late will receive a further 10% penalty. Each subsequent 24 hours will result in a further 10% penalty.**
- **In cases where a student misses an assessment on account of a medical reason or with prior permission; in line with University regulations an incomplete grade for the specific assessment will be awarded and an alternative assessment or extension can be arranged.**

***Student Complaints Policy***

**Students at The Hashemite University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.**

## COURSE ASSESSMENT

***Course Calendar and Assessment***

**Students will be graded through the following means of assessment and their final grade will be calculated from the forms of assessment as listed below with their grade weighting taken into account. The criteria for grading are listed at the end of the syllabus**

| Assessment | Grade Weighting | Deadline Assessment |
|---|---|---|
| | | |
| **Exam 1** | **30%** | **TBD** |
| **Exam 2** | **30%** | **TBD** |
| **Final Exam** | **40%** | **TBD** |

**Test questions will predominately come from material presented in the lectures. Semester exams will be conducted during the regularly scheduled lecture period. Exam will consist of multiple choice questions for the regular exams and short assay questions for makeup exams (for students with accepted excuses, 0nly documented absences will be considered as per HU guidelines).**

**Grades are not negotiable and are awarded to the MD program according to the following criteria*:**

**Grades are not negotiable and are awarded according to the following criteria*:**

| Letter grade | Description | Grade Points |
|---|---|---|
| A+ | Excellent | 4.00 |
| A | | 3.75 |
| A- | | 3.50 |
| B+ | Very Good | 3.25 |
| B | | 3.00 |
| B- | | 2.75 |
| C+ | Good | 2.50 |
| C | | 2.25 |
| C- | | 2.00 |
| D+ | Pass | 1.75 |
| D | Pass | 1.50 |
| F | Fail | 0.00 |
| I | Incomplete | - |

| Week | Topic |
|---|---|
| Week 1 | Introduction to Human Anatomy |
| | Axial Skeleton I: The Skull |
| Week 2 | Axial Skeleton II: Mandible, Vertebral Column, Sternum & Ribs |
| | Appendicular Skeleton I: Bones of Upper Limb |
| Week 3 | Appendicular Skeleton II: Bones of Lower Limb |
| | Muscular System |
| Week 4 | Muscles of Scalp, Face, & Eye |
| | Muscles of the Neck |
| Week 5 | Muscles of Thoracic, abdominal & Pelvic Walls |
| | Muscles of upper Limb |
| Week 6 | Muscles of lower Limb |
| | Appendicular Skeleton II: Bones of Lower Limb |
| Week 7 | Body Joints |
| | Circulatory System I |
| Week 8 | Circulatory System II |
| | Respiratory System I |
| Week 9 | Respiratory System II |
| | Digestive System I |
| Week 10 | Digestive System II |
| | Urinary System |
| Week 11 | Male Genital System |
| | Female Genital System |
| Week 12 | Nervous System I: The cerebral hemisphere |
| | Nervous System II: The spinal cord |
| Week 13 | Nervous System III: The brain stem |
| | General Embryology I |
| Week 14 | General Embryology II |
| | General Embryology III |

**WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION**