The University of Jordan

Accreditation & Quality Assurance Center

Course Syllabus

Anatomy and Embryology for medical students
<table>
<thead>
<tr>
<th></th>
<th>Course title</th>
<th>Anatomy and Embryology</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Course number</td>
<td>0502110</td>
</tr>
<tr>
<td>3</td>
<td>Credit hours (theory, practical)</td>
<td>3 (2 theory, 1 practical)</td>
</tr>
<tr>
<td></td>
<td>Contact hours (theory, practical)</td>
<td>Theory: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Practical: 1</td>
</tr>
<tr>
<td>4</td>
<td>Prerequisites</td>
<td>Biology 0304102</td>
</tr>
<tr>
<td>5</td>
<td>Program title</td>
<td>Doctor of Medicine</td>
</tr>
<tr>
<td>6</td>
<td>Program code</td>
<td>05</td>
</tr>
<tr>
<td>7</td>
<td>Awarding institution</td>
<td>The University Of Jordan</td>
</tr>
<tr>
<td>8</td>
<td>Faculty</td>
<td>School of Medicine</td>
</tr>
<tr>
<td>9</td>
<td>Department</td>
<td>Anatomy and Histology</td>
</tr>
<tr>
<td>10</td>
<td>Level of course</td>
<td>1st year</td>
</tr>
<tr>
<td>11</td>
<td>Year of study and semester (s)</td>
<td>2016/2017 second semester</td>
</tr>
<tr>
<td>12</td>
<td>Final Qualification</td>
<td>Doctor of Medicine</td>
</tr>
<tr>
<td>13</td>
<td>Other department (s) involved in</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>teaching the course</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Language of Instruction</td>
<td>English</td>
</tr>
<tr>
<td>15</td>
<td>Date of production/revision</td>
<td>1/9/2016</td>
</tr>
</tbody>
</table>

**16. Course Coordinator:**

Dr. Amjad Shatarat  
Office number 05  
Office phone 23425  
Email: a.shatarat@ju.edu.jo
17. Other instructors:

Dr. Maher Al-Hadidi
Office NO. 123
Office phone 23426

18. Course Description:

A) Gross Anatomy:
The course is designed to provide students with clear and detailed concepts of general anatomy. General overview of the upper and lower limbs, introduction to thorax, abdomen and their main structures.

B) Embryology

The course is designed to provide students with clear and detailed concepts of General Embryology. A general overview of the fetal development and its major milestones will be learnt; starting from fertilization, implantation and its subsequent development into a bilaminar and trilaminar germ discs. By the end of the course, students will acquire the ability to list derivatives of Ectoderm, Mesoderm and Endoderm

19. Course aims and outcomes:

The objectives of this course include teaching the students general anatomy and embryology, as well as enabling them to distinguish between various anatomical structures and their functions.

At the end of this course, the student is expected to have general knowledge in human anatomy, distinguish the various structures, and understand the blood & nerve supply and the function of each structure. Furthermore, the student must learn the major phases of fertilization, implantation, and fetal development.
## 20. Topic Outline and Schedule:

<table>
<thead>
<tr>
<th>week</th>
<th>content</th>
<th>Lecturer</th>
<th>outcomes</th>
<th>evaluation</th>
<th>References</th>
</tr>
</thead>
</table>
| 1    | Anatomy: Introduction to anatomy and bones of the upper limb  
   Embryology: Male genital system |          | - Define anatomical position, planes, and directional terms.  
   - Identify and describe bones of the upper limb  
   - Distinguish anatomy of the male reproductive system (parts, function and neurovascular supply) | 1- Exams  
   2- End of course evaluation form  
   3- Practical session exams | •Clinical Anatomy by Regions, Snell  
   •Clinical Anatomy by system, Snell  
   •Grays Atlas of anatomy, Drake  
   •Langman's medical embryology, Sadler |
| 2    | Anatomy-, Scapular and Pectoral regions  
   Axilla  
   Embryology- female reproductive system |          | - Identify muscles of pectoral and scapular regions, (actions and nerve supply  
   - Locate axilla, its boundaries and contents.  
   - Distinguish anatomy of the male reproductive system (parts, function and neurovascular supply) | •Clinical Anatomy by Regions, Snell  
   •Clinical Anatomy by system, Snell  
   •Grays Atlas of anatomy, Drake  
   •Langman's medical embryology, Sadler |
| 3    | Anatomy-  
   Brachial plexus and upper arm |          | - Describe the brachial plexus, its formation and region of supply.  
   • Summarize | •Clinical Anatomy by Regions, Snell  
   •Clinical Anatomy by system, Snell  
   •Grays Atlas of anatomy, Drake  
   •Langman's medical embryology, Sadler |
<table>
<thead>
<tr>
<th></th>
<th>Embryology- gametogenesis (Spermatogenesis)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Embryology- Gametogenesis (Oogenesis)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anatomy- cubital fossa and the flexor compartment of the forearm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anatomy- extensor compartment of forearm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Embryology- First week of development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anatomy- the hand region</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Embryology- fertilization &amp; cleavage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anatomy- joints of the upper limb and nerve supply</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Embryology- implantation &amp;</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Anatomy</td>
<td>Embryology</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>8</td>
<td>nerve injuries of the upper limb</td>
<td>Formation of bilaminar disc</td>
</tr>
<tr>
<td>9</td>
<td>thoracic cage and intercostal muscles</td>
<td>bilaminar germ disc 2</td>
</tr>
<tr>
<td>10</td>
<td>Diaphragm</td>
<td>trilaminar germ disc</td>
</tr>
<tr>
<td>11</td>
<td>pleura, lungs, and mediastinum</td>
<td>derivatives of the ectoderm and neural tube</td>
</tr>
<tr>
<td>12</td>
<td>Heart, pericardium,</td>
<td></td>
</tr>
</tbody>
</table>

- **blastocyst**
- Describe the process of implantation
- Identify the meaning of blastocyst.

- **Anatomy**
- **Embryology**

- Understand the clinical consequence of injury to major nerves of the upper limb.
- define the bilaminar disc and its significance for the implantation during the second week of fetal development.

- Outline thoracic wall and its basic structures
- Describe the formation of the bilaminar germ disc and the amniotic cavity

- Identify the diaphragm and its anatomy.
- Describe the formation of trilaminar germ disc

- Outline the subdivisions of mediastinum and the anatomy of lungs and pleura.
- Understand and list derivatives of ectoderm

- describe the anatomy of the
| 13 | Anatomy - anterior abdominal wall and peritoneum  | • describe anatomy of abdominal walls, their function and structure denoting to the arrangement of the peritoneum inside the abdominal cavity.  
• Describe the normal and pathological development of fetus.  
  |
| 14 | Anatomy - stomach, small and large intestines    | • identify general anatomical features of the stomach, small and large intestines.  
• describe the anatomy and physiology of the placenta.  
  |
| 15 | Anatomy - accessory digestive organs             | • identify general anatomical features of the liver, gallbladder pancreas and bile duct.  
• Describe the formation and progression of the development of the fetal membranes  
  |
21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:
- Small Group discussions
- Group presentations
- Student demonstration activities (class presentations and Practical sessions demonstrations)

22. Evaluation Methods and Course Requirements:

- Midterm Exam
- Short Exam
- Final Exam
- Course evaluation forms

23. Course Policies:

A- Attendance policies:
Students are expected to attend all class sessions as listed on the course calendar. Students are not allowed to be absent for more than 15% of the credit hours of the course. All students are required to wear a lab coat during the laboratory session.

B- Absences from exams and handing in assignments on time:
Make-up appeals are considered only for students who provide documentation of a compelling reason for missing the exam.

C- Health and safety procedures:
college Members and students must at all times, conform to Health and Safety rules and procedures.

**D- Honesty policy regarding cheating, plagiarism, misbehavior:**

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom. Students violate this policy would be subjected to disciplinary action according to University of Jordan disciplinary policies.

**E- Grading policy:**

Grade-point average according to grading policy at University of Jordan.

**F- Available university services that support achievement in the course:**

Internet database at the University of Jordan
The University of Jordan library

---

24. **Required equipment:**

1. Formalin preserved human cadavers and body parts.
2. Plastinated human cadavers and body parts.
3. Plastic models

25. **References:**

Required book (s), assigned reading and audio-visuals:

**Clinical Anatomy. By R. Snell**

Recommended books, materials, and media:

- **Principles of Anatomy and Physiology. Tortora and Grabowsk**
- **Grant’s atlas of anatomy**
26. Additional information:

Name of Course Coordinator: ------------------------Signature: ------------------

------- Date: ------------------------ Head of curriculum committee/Department: ------------------------ Signature: ------------------

----------------

Head of Department: ------------------------ Signature: ------------------

----------

Head of curriculum committee/Faculty: ------------------------

Signature: ------------------------

Dean: ------------------------Signature: ------------------

---------

Copy to:
Head of Department
Assistant Dean for Quality Assurance
Course File