



COURSE SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Program offering the course	M.Sc.
(2) Department offering the program	Anatomy and Embryology
(3) Department responsible for teaching the course	Anatomy and Embryology
(4) Part of the program	First part
(5) Date of approval by the Department's council	18/5/2016
(6) Date of last approval of programme specification by Faculty council	9-8-2016
(7) Course title	General Embryology
(8) Course code	ANA 501 GE
(9) Total credit hours	2 (theoretical) 1 (practical)

(B) Professional information.

(1) Course Aims:

The main aims of this course are to gain deep insights into general principles of human embryology, and to develop his/her professional and communication skills.

(2) Intended Learning Outcomes (ILOs):

A- Knowledge and Understanding:

By the end of the course, the candidates should be able to:

K 1 Define the medical terminology used in the field of embryology.

K 2 Describe the process of gametes formation fertilization and implantation.

K 3 Discuss the formation and differentiation of the three germ layers.

K 4 Record prenatal periods and growth changes.

K 5 Recognize the functions of the fetal membranes and identify their anomalies.

K 6 Recognize the formation and differences between all types of twins.

K 6 Discuss the general causes of various forms of congenital anomalies.

B- Intellectual skills:

By the end of the course the candidates should be able to

I 1 Integrate anatomical events with their embryological basis.

I 2 Correlate his knowledge in embryology with the clinical findings based on maldevelopment.

I 3 Evaluate risk factors that can cause congenital malformations.

C- Practical skills:

By the end of the course the candidates should be able to

P1 Prepare histological sections of different embryological stages.

P 2 Sketch diagrams of stages of development.

P 3 Design a practical model for all the stages of development from the stage of gametogenesis to the full term.

D- Communication & Transferable skills:

By the end of the course the candidates should be able to:

T 1 Communicate efficiently using technology to gain knowledge.

T 2 Support the learning of others when involved in a team work.

T 3 Demonstrate self awareness and motivation and ability to identify his own needs.

(3) Course content:

Subjects	Lectures	Laboratory
1. Gametogenesis.	4	6
2. Female reproductive cycles.	2	3
3. Fertilization and formation of germ layers	4	5
4. Differentiation of germ layers	4	6
5. Prenatal periods.	4	-
6. Fetal membranes.	4	5
7. Twins.	4	5
8. Causes of congenital malformations	4	-
Total	30	30

(4) Teaching methods:

- 4.1. Lectures
- 4.2. Practical sessions
- 4.3. Group discussion
- 4.4. Presentation by students

(5) Assessment methods:

- 5.1. **Written exam (one paper, 3 hours)** for assessment of K1–6, I1–3
- 5.2. **Oral Exam** for assessment of K1–6, I1–3, T1–3.
- 5.3. **Practical exam** for assessment of P1–3

Assessment schedule.

Final Exam (210 marks): at the end of the course

Percentage of each Assessment to the total mark.

Written exam: 120 marks (60%); **Essay:** 96 marks, **MCQ:** 24 marks

Oral exam: 45 marks (20%)

Practical exam: 45 marks (20%)

(6) References of the course:

6.1. Hand books: Department Book

6.2. Text books:

Langman's Embryology.

Keith L. Moore Embryology.

Netter's Atlas.

Snell's Atlas.

Grey's Anatomy.

6.3. Websites:

https://embryology.med.unsw.edu.au/embryology/index.php/Main_Page

http://www.indiana.edu/~anat550/embryo_main/

<http://www.embryology.ch/indexen.html>

<http://embryo.soad.umich.edu/links/links.html>

6.4. Journals:

- **Human Genetics & Embryology**

<http://www.omicsonline.org/human-genetics-embryology.php>

- **Advances in Anatomy Embryology and Cell Biology**

<http://www.springer.com/west/home/life+sci?SGWID=4-10027-69-173622675-0>

- **HSOA Journal of Human Genetics & Clinical Embryology**

<http://www.heraldopenaccess.us/journals/Human-Genetics-&-Clinical-Embryology/>

- **Development**

<http://dev.biologists.org/>

- **Current Topics in Developmental Biology**

<http://www.sciencedirect.com/science/journal/00702153>

(7) Facilities and resources mandatory for course completion.

- Lecture room
- Histology lab
- Computers, data show projector and internet connection

Course coordinator: Prof. Mostafa Abdel-Moneem

Head of the department: Prof. Adel Al-Hawary

Date: 18/5/2016