



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.	Histology and Cytology
(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.	Basics of Genetics
(8) Course code.	ANA 501 GE
(9) Credit hours.	2 (lectures)

(B) Professional information

(1) Course Aims:

The main aim of this course is to gain deep insights into general basics of genetics.

(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 principles of genetics and clinical applications dependant on genetic basis.

K 2 Describe the structure and function of DNA.

K 3 Discuss RNA and protein, structure and synthesis.

K 4 Record the DNA repair system and gene mutation.

K 5 Recognize the human genome, pattern of inheritance and genetic basis of cancer.

B- Intellectual skills:

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

I 1 Integrate anatomical events with genetic basis.

I 2 Analyze different cytogenetic techniques.

(3) Course content:

Subjects	Lectures
1. DNA Structure	4
2. DNA replication	4
3. Types of RNA	2
4. Transcription	2
5. Protein structure	2
6. Protein synthesis	2
7. Human genome	2
8. DNA repair	2
9. Mutation	2
10. Cell division	2
11. Gene expression	2
12. Regulation of gene expression	4
Total	30

C- Teaching methods:

4.1. Lectures

4.2. Group discussion

4.3. Presentation by students

D- Assessment methods:

Written exam (one paper, 3 hours) for assessment of K1-5, I1,2.
Assessment schedule.

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

Percentage of each Assessment to the total mark.

Written exam. 210 marks (100%). Essay: 80%, MCQ 20%.

E- References of the course:

6.1: Hand books: prepared by the department teaching the course.

6.2: Text books.

- Molecular Medicine (R.J. Trent)
- Human Genetics and Genomics. (Bruce R. Korf, Mira B. Irons)

6.3: 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/>

F- Facilities and resources mandatory for course completion.

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

Course coordinator: Department of Histology and Cytology

Head of the Department: Prof. Dr. Adel Al-Hawary

Date: 18/5/2016