



Course specification

University/Academy: Damanhour

Faculty/Institute: Science

Department zoology

1. course Data:

Course code: Zool304	Course title: genetics	Academic year 2009-2010 level: third year students / 2 nd term		
Specialization: Special zoology	No. of instructional units: lecture	3hrs/ week	practical	3hrs/ wee

2. course Aim

- The aim of this course is to ensure that students have the necessary knowledge of mendelian genetics , regulation of gene expression and population genetics with especial emphasis on genetic engineering.
- A resource for study that assists them in their careers long after they have completed the course.
- To deal with the rules of inheritance in the cell, individual and population.
- To link between Mendelian genetics and molecular biotechnology.

3. Intended learning outcome

a) Knowledge and understanding

A1: Describe the structure and function of the genetic material and the human genome.



	<p>A2: Recognize the basis of mutation and genetic variability and the impact of the environment on gene expression.</p> <p>A3: Recognize a few common genetic disorders and the impact of these conditions on the health of the affected individual.</p> <p>A4: Illustrate the differences in the inheritance patterns of single gene diseases, multifactorial diseases, and chromosomal disorders and in germline and somatic cell mutations</p>
b) Intellectual skills	<p>B1: evaluate the benefits and risks of genetics-related technologies, including genetic testing, gene therapy, and genetic engineering.</p> <p>B2: formulate information on genetic disorders and services through electronic media or through public or private health care resources.</p> <p>B3: Analyze the information concerning the basic structure of genetic materials, its replication and expression.</p>
c) Professional skills	<p>C1: examine with understanding a human genetics article in a general interest magazine or newspaper and write a summary including the main point of the article.</p> <p>C2: prepare gene maps.</p> <p>C3: elicit reasons of chromosomal aberrations</p>
d) General skills	<p>D1: Exchange ideas, principles, and theories.</p> <p>D2: work effectively both in a team and independently</p>
4. course content	<ul style="list-style-type: none"> -Brief overview of the history of genetics -Mendelian genetics -Mutations. -Extension of Mendelian genetic analysis -Linkage, crossing-over, and gene mapping -The structure of genetic material -Regulation of gene expression



	-Chromosomal basis of inheritance, sex determination and linkage.
5. Teaching and learning methods	5.1.Lecturer using blackboard, whiteboard and data show. 5.2.Using Power Point and illustrations. 5.3.Direct conventional lectures. 5.4.research papers reporting. 5.5.Laboratory experiments.
6. teaching and learning methods for students with special needs	
7. Student Assessment	
a) Procedures used:	7.1. Mid term exam. 7.2.Final Practical exam. 7.3. Final written exam
b) Schedule:	Assessment 1: quiz during lectures and one during practical work Week: 4 Assessment 2: practical exam Week: 14 Assessment 3: Final term exam Week: 15
c) Weighing of Assessment:	Mid-Term Examination: (10) 5 % Final-Term Examination: (150) 75% Oral Examination: 0 % Practical Examination: (25) 12.5 % Semester Work: (15) 7.5 % Other types of assessment: 0 %



	Total (200) 100%
8. List of Textbooks and References:	
a) Course Notes	-----
b) Required Books (Textbooks)	-----
c) Recommended Books	-----
d) Periodicals, web sites,...,etc	www.wikipedia.com

Course Instructor: Dr. Ali eldib

Head of Department: Prof . Karoline Kamel Abdel Aziz

Date: -----/-----/-----