



Course specification

University/Academy: Damanhour

Faculty/Institute: Science

Department Zoology

1. course Data:

Course code: Zool 402	Course title: Experimental Embryology	Academic year:2010/2011 level: 4 th year /2 nd term.
Specialization: Special zoology	No. of instructional units: lecture	3hrs/ week practical 3hrs/ week

2. course Aim

- To understand the basic concepts of embryology
- Be aware of different methodologies used in embryology.
- To understand the role organizers and their impotence in developmental processes .
- To evaluate the effect of some physical and chemical agents on embryonic development.

3. Intended learning outcome

a) Knowledge and understanding

- A1: Mention cell-tagging techniques, combined with sophisticated imaging methods to visualize even subtle movements of individual cells in the embryos, as they morph, divide, and migrate.
- A2: Describe how to insert a DNA vector into very young bird (quail and chicken) embryos using a method called electro-poration.
- A3: Recognize the environment in which fertilization and embryo development occurs.

b) Intellectual skills

- B1: Determine the effect of environment not only on preimplantation embryo development but also the phenotype of resulting offspring.



	<p>B2: Discuss that the organizer is formed in an equatorial sector of the blastula stage amphibian embryo by cells that have responded to two maternal agents.</p> <p>B3: Differentiate between the effects of chemical and physical agents on embryonic development</p>
c) Professional skills	<p>C1: evaluate how the embryonic development is affected mainly by physical agents.</p> <p>C2: Demonstrate the chemical agents affecting embryonic developments.</p>
d) General skills	<p>D1: Communicate with each other for interpretation of stages of embryonic development of amphibian.</p> <p>D2: solve problems regarding the interactions between physical and chemical factors affecting the embryonic development.</p>
4. course content	<ul style="list-style-type: none"> • The concepts of embryology • Technical methods used in embryology • Organisers and their importance in developmental process • Effect of chemical agents on embryonic development • Physical agents affect the embryonic development • Effects environment or fertilization • Congenital abnormalities • Stem cell
5. Teaching and learning methods	<p>5.1. Using Power Point and illustrations.</p> <p>5.2. Laboratory practice to improve practical skills</p> <p>5.3. Direct conventional lectures.</p> <p>5.4. Self information collection and evaluation as assays.</p> <p>5.5. Discussion through lectures and practice.</p>



<p>6. teaching and learning methods for students with special needs</p>	<p>-----</p>																					
<p>7. Student Assessment</p>																						
<p>a) Procedures used:</p>	<p>Final term exam. practical exam (dissection of toad). practical exam (slides of Histology). One quiz during lectures and one during practical work.</p>																					
<p>b) Schedule:</p>	<p>Assessment 1: quiz during lectures and one during practical work Week: 4 Assessment 2: practical exam (dissection of toad) Week: 8 Assessment 3: practical exam (slides of Histology). Week: 14 Assessment 4: Final term exam Week: 15</p>																					
<p>c) Weighing of Assessment:</p>	<table border="0"> <tr> <td>Mid-Term Examination:</td> <td>(10)</td> <td>5 %</td> </tr> <tr> <td>Final-Term Examination:</td> <td>(150)</td> <td>75 %</td> </tr> <tr> <td>Oral Examination:</td> <td></td> <td>%</td> </tr> <tr> <td>Practical Examination:</td> <td>(25)</td> <td>12.5 %</td> </tr> <tr> <td>Semester Work:</td> <td>(15)</td> <td>7.5 %</td> </tr> <tr> <td colspan="3">Other types of assessment:</td> </tr> <tr> <td>Total</td> <td>(200)</td> <td>100%</td> </tr> </table>	Mid-Term Examination:	(10)	5 %	Final-Term Examination:	(150)	75 %	Oral Examination:		%	Practical Examination:	(25)	12.5 %	Semester Work:	(15)	7.5 %	Other types of assessment:			Total	(200)	100%
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<p>8. List of Textbooks and References:</p>	<p>-----</p>																					



a) Course Notes	General zoology , practical zoology.
b) Required Books (Textbooks)	-----
c) Recommended Books	-----
d) Periodicals, web sites,...,etc	http//www.wekepedia.com

Course Instructor: Dr. Abd Elfatah Elpeltagy

Head of Department: Prof . Karoline Kamel Abdel Aziz

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