



Course specification

University/Academy: Damnhour

Faculty/Institute: Science

Department Zoology

1. course Data:		
Course code: Zool 421	Course title: comparative anatomy.	Academic year:2010/2011 level: 1 st term \4 th year student
Specialization: Zoology and chemestery	No. of instructional units: lecture <input type="text" value="2hrs"/> practical <input type="text" value="3hrs"/>	

2. course Aim	-Describe an introduction to comparative anatomy. -Recognize anatomy of the following chordates systems (Dermal, Skeletal, urinogenital, respiratory and nervous).
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3. Intended learning outcome	
a) Knowledge and understanding	A1. Describe structure of organ systems of vertebrates A2. Recognize development of various organs in vertebrates A3. Identify and draw the internal body organs of vertebrates A4. Explain the structural functional adaptation of species.
b) Intellectual skills	B1. Formulate many problems concerning the functions of various organs and systems of body dealing with the rise evolution and phylogeny. B2. Compare between the anatomical structures of studied vertebrates B3: Discus the organ development among



	different studied invertebrates.
c) Professional skills	<p>C1. Use light and electron microscope to investigate the studied slides.</p> <p>C2: Examine ,classify the samples & show the mounts of different animal also the microscopical slide of different organs</p>
d) General skills	<p>D1: Integrate and evaluate information from a variety of sources.</p> <p>D2: Learn independently with open-minded and critical enquiry.</p> <p>D3: Exchange ideas, principles, and theories</p>
4. course content	<ul style="list-style-type: none"> -Rise of Embryology -Introduction to Comparative Anatomy and Evolution of vertebrates. -Comparative study of coelom in chordates. -Dermal system in lower chordates. -Dermal system in fishes -Dermal system in amphibians and reptiles. -Dermal system in birds and mammals. -Structure and development of teeth. -Nervous system in chordates. -Comparative Anatomy of the skeletal system: Introduction on the skeletal system in vertebrates (axial and appendicular). -The vertebral column: general structure and development.
5. Teaching and learning methods	<p>4.1- Lecture</p> <p>4.2 - Practical</p> <p>4.3- Problem-Based Learning.</p> <p>4.4-Encourage students to use online and library</p>



	resources																					
6. teaching and learning methods for students with special needs	<ul style="list-style-type: none"> • Data show projectors (LCD) • White boards and erasable markers • Equipment and Materials for laboratory study (Histological slides) 																					
7. Student Assessment																						
a) Procedures used:	<p>7.1- Final-Term Examination: to assess student writing and drawing ability expressing his/her understanding of comparative anatomy and evolution</p> <p>7.2- Class activities (reports, discussions, practical...etc): to assess the student intellectual, professional, practical and general and transferable skills</p>																					
b) Schedule:	<p>Assessment 1 Practical Examination Week 14</p> <p>Assessment 1 Final-Term Examination at the end of the course</p>																					
c) Weighing of Assessment:	<table> <tr> <td>Mid-Term Examination</td> <td>15</td> <td>7.5%</td> </tr> <tr> <td>Final-Term Examination</td> <td>100</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>10</td> <td>5.0%</td> </tr> <tr> <td><u>other types of assessment</u></td> <td>_____</td> <td>Total</td> </tr> <tr> <td></td> <td>150</td> <td>100%</td> </tr> </table>	Mid-Term Examination	15	7.5%	Final-Term Examination	100	75%	Oral Examination			Practical Examination	25	12.5%	Semester Work	10	5.0%	<u>other types of assessment</u>	_____	Total		150	100%
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8. List of Textbooks and References:																						
a) Course Notes	-----																					
b) Required Books (Textbooks)	<p>Hildebrand, M.(1988): Analysis of Vertebrate Structure. 3rd ed. John Wiley & Sons, Inc. New York.</p> <p>Kluge, A.G. (1977): Chordate structure and Function. 2nd ed. Macm.Publ.Co.,Inc. New York.</p> <p>Young, J.Z. (1985): The Life of Vertebrates. 3rd ed.</p>																					



	Oxford Univ.Press. New York.
c) Recommended Books	<ul style="list-style-type: none">-Hopper, A. (1985): Foundation of animal development. 2nd Edition. Oxford Univ.Press. New York.-Hole, J. (1986): Essentials of human Anatomy and Physiology. 2nd Edition Brown Publishers. USA.
d) Periodicals, web sites,...,etc	<ul style="list-style-type: none">-Journal of Experimental Zoology.-Journal of Development.-Differentiation.-Arch. Anat. Microsc. Morphol. Exp.

Course Instructor: Dr. Abedelfatah Elbeltagy

Head of Department: Prof. Karoline Kamel Abdel Aziz

Date: -----/-----/2011