



## Course specification

University/Academy Damanhour

Faculty/Institute: Science

Department: zoology

### 1. course Data:

<b>Course code:</b> Zool 201	<b>Course title:</b> Invertebrates	<b>Academic year:</b> 2008/2009 <b>level:</b> (first term) / 2 <sup>nd</sup> year
<b>Specialization:</b> Program of biology group	<b>No. of instructional units:</b> lecture <input type="text" value="3 hr/week"/> practical <input type="text" value="4 hr/week"/>	

### 2. course Aim

To understand morphology , life history ,and evolution of higher invertebrate arthropod, mollusca and echinodermate

### 3. Intended learning outcome

<b>a) Knowledge and understanding</b>	Upon successful completion of this course the student should be able to:  A1 : List the characteristics which define annelida arthropods, mollusks and echinodermata.  A2 : Identify the classes of the above phyla.  A3 : Mention similarities and differences in morphology which indicate phylogenetic relations ships.
<b>b) Intellectual skills</b>	They will also acquire the ability to:  B1: Distinguish between the classes of each phyla.  B2 : Compare and contrast the anatomy of there



	<p>representive</p> <p>classes of each phylum.</p>
<b>c) Professional skills</b>	<p>By the end of the course, students will be able to:</p> <p>C1: Use the light microscope to identify various examples of invertebrates.</p> <p>C2: Dissect selected examples of the main invertebrate group.</p> <p>C3: draw and classify the samples.</p>
<b>d) General skills</b>	<p>By the end of the course, students will be able to:</p> <p>D1: Write reports with the standard scientific guidelines.</p> <p>D2: Communication effectively both in a team and independently.</p> <p>D3: Exchange ideas, principles and information by oral, written and visual means.</p>
<b>4. course content</b>	<p>Phylum annelida</p> <p><i>Allolobopfera sp.</i></p> <ul style="list-style-type: none"> <li>• <i>Neries sp.</i></li> </ul> <p>Phylum arthropda</p> <p>Subphylum Mandibulata</p> <ul style="list-style-type: none"> <li>• <i>Penaesus sp.</i></li> <li>• Classification of crustacean</li> <li>• Class Myriapoda</li> </ul> <p>Subphylum Chelicerata .</p> <ul style="list-style-type: none"> <li>• <i>Buthus sp.</i></li> </ul> <p><i>Lycosa sp.</i></p> <ul style="list-style-type: none"> <li>• Soft tick and hard tick</li> </ul> <p>Phylum Mollusca</p> <p>Class Polyplacophora</p> <ul style="list-style-type: none"> <li>• Chiton sp.</li> </ul>



	<p>Class Gastropoda</p> <ul style="list-style-type: none"> <li>• <i>Helix sp.</i></li> </ul> <p>Class Bivalvia</p> <ul style="list-style-type: none"> <li>• <i>Anodonta sp.</i></li> </ul> <p>Class Cephalopoda</p> <ul style="list-style-type: none"> <li>• <i>Sepia sp.</i></li> </ul> <p>Phylum Echinodermata</p> <ul style="list-style-type: none"> <li>• <i>Astropecten sp.</i></li> </ul>										
<b>5. Teaching and learning methods</b>	<p>1. Lectures.</p> <p>2. practical work.</p>										
<b>6. teaching and learning methods for students with special needs</b>	-----										
<b>7. Student Assessment</b>											
<b>a) Procedures used:</b>	<p>1. Mid term exam.</p> <p>2. Final Practical exam.</p> <p>3. Final written exam</p>										
<b>b) Schedule:</b>	<table> <tr> <td>Assessment 1: Mid term exam</td> <td>Week: 10</td> </tr> <tr> <td>Assessment 2 Practical exam:</td> <td>Week: 15</td> </tr> <tr> <td>Assessment 3: Final written exam</td> <td>Week: 16</td> </tr> </table>	Assessment 1: Mid term exam	Week: 10	Assessment 2 Practical exam:	Week: 15	Assessment 3: Final written exam	Week: 16				
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<b>c) Weighing of Assessment:</b>	<table> <tr> <td>Mid-Term Examination:</td> <td>10</td> </tr> <tr> <td>Final-Term Examination:</td> <td>150</td> </tr> <tr> <td>Oral Examination: -----</td> <td></td> </tr> <tr> <td>Practical Examination:</td> <td>30</td> </tr> <tr> <td>Semester Work:</td> <td>10</td> </tr> </table>	Mid-Term Examination:	10	Final-Term Examination:	150	Oral Examination: -----		Practical Examination:	30	Semester Work:	10
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Final-Term Examination:	150										
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	Other types of assessment: ----- Total 200
<b>d) Course Notes</b>	-----
<b>e) Required Books (Textbooks)</b>	Gamil N. Soliman; The Mideastern invertebrate funa part 1, 2 Egypt 2007.
<b>f) Recommended Books</b>	Barnes, R.S.K. :”Kingdom animalia”. In Asynoptic classification of living organisms. Blachwell scientific publication 1984. Barnes, R.S.K. : The invertebrates A new synthesis PC low and P jw olive, 1989.
<b>g) Periodicals, web sites,....,etc</b>	www.mhhe.com <a href="http://www.blackwellpublishing.com">www.blackwellpublishing.com</a>

**Course Instructor: Dr. Gihan El- Khodary**

**Head of Department: Prof . Karoline Kamel Abdel Aziz**

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