



Course specification

University/Academy: Damanhour

Faculty/Institute: Science

Department: Botany

1. course Data:		
Course code: Bot101	Course title: (Plant Physiology- Plant Anatomy- Plant Morphology)	Academic year/level: 2007\2008 1 st year / 1 st term
Specialization: Biology group	No. of instructional units: lecture <input type="text" value="3hr/week"/> tutorial <input type="text" value="-"/> practical <input type="text" value="4hr/week"/>	

2. course Aim	<ul style="list-style-type: none"> -Provide a broad-based integrated study of the biochemical processes occurred in plants. -Acquire a compilation work and embodies a fairly comprehensive treatment of the fundamental facts and aspects of plant anatomy. -Provide a background of facts terminology and internal structure of common plants around us.
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3. Intended learning outcome

a) Knowledge and understanding	<p>A1: Mention the types and the main characters of solutions. List the properties of colloidal system. Define and give the slight differences between diffusion, osmosis, permeability and imbibition.</p> <p>A2: Summarize the major concepts concerned with absorption & transportation of water by plants</p> <p>A3: List the anatomical properties of roots, stems and leaves</p> <p>A4: Draw various plant tissues and organs.</p> <p>A5: Describe the different modifications in plant organs</p>
b) Intellectual skills	<p>On completion of this course, students will able to:</p> <p>B1: Compare between true, colloidal and suspension and evaluate the role of colloidal in physiological processes.</p> <p>B2: Contrast between the histological differences of plant organs (microscopically).</p> <p>B3: interpret the changes in tissues structure and in plant organ morphology due to plant environment (soil, climate, ...etc</p>
c) Professional skills	<p>On completion of this course, students will able to:</p> <p>C1: Prepare different types of solutions.</p> <p>C2: Examine the adsorption properties of colloids.</p> <p>C3: Use the microscope to investigate different plant tissues.</p> <p>C4: Prepare several sections in plant specimen, examine under microscope, and draw sections in root, stem and leaf.</p>



	C5: Prepare plant sheets to dissect different leaves, stems and roots shapes.														
d) General skills	On completion of this course, students will able to: D1: Continuously update the course material by looking to recent research through internet. D2: Work separately and/or in team-work to research and write scientific reports. D3: Communicate effectively with their lecturer and colleagues														
4. course content	<table border="1"> <tr><td>Introduction</td></tr> <tr><td>Permeability and osmosis</td></tr> <tr><td>Imbibitions and water absorption</td></tr> <tr><td>Water loss</td></tr> <tr><td>Mineral salt absorption</td></tr> <tr><td>Seed germination</td></tr> <tr><td>Root system</td></tr> <tr><td>Shoot system</td></tr> <tr><td>Plant modifications</td></tr> <tr><td>Structure of plant cell</td></tr> <tr><td>The primary permanent plant tissues</td></tr> <tr><td>Root anatomy</td></tr> <tr><td>Stem anatomy</td></tr> <tr><td>Leaf anatomy</td></tr> </table>	Introduction	Permeability and osmosis	Imbibitions and water absorption	Water loss	Mineral salt absorption	Seed germination	Root system	Shoot system	Plant modifications	Structure of plant cell	The primary permanent plant tissues	Root anatomy	Stem anatomy	Leaf anatomy
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5. Teaching and learning methods	Lectures and seminars. Lab work Problems. Short reports														
6. teaching and learning methods for students with special needs	<ul style="list-style-type: none"> • Computer hall to be used in visual labs and simulation experiments. • Data show, overhead projector 														
7. Student Assessment															
a) Procedures used:	7.1. Final Written exam to assess knowledge, understanding and intellectual skills 7.2. Practical exam to assess practical skills 7.3. Midterm exam to assess understanding and intellectual skills. Quizzes														



b) Schedule:	Assessment 1: Quizzes Week: 4-7 Assessment 2: Mid term exam Week: 8 Assessment 3: Practical exam Week: 15 Assessment 4: Final written exam Week: 16
c) Weighing of Assessment:	Weighing of Assessments Mid-Term Examination: 10 Final-Term Examination: 150 Practical Examination: 30 Semester Work: 10 <hr/> Total : 200
8. List of Textbooks and References:	-----
a) Course Notes	-----
b) Required Books (Textbooks)	General botany, Plant physiology (4 th edition)
c) Recommended Books	- Plant physiology Frank B Salisbury, Plant anatomy, S Chand
d) Periodicals, web sites,...,etc	J. of Plant physiology J. of Plant Science

Course Instructor: -----

Head of Department: Dr.

Date: 11/10/2009