

توصيف مقرر دراسي

١ بيانات المقرر		
الرمز الكودي :	أسم المقرر:	المستوى :
Botany (2)	Plant Physiology & Anatomy	الأول (بيولوجي)
التخصص: علوم البيئة	عدد الوحدات الدراسية: ٧	نظري ٣ تمارين ٠ عملي ٤

٢ هدف المقرر:		For students undertaking this course, the aims are to: 1-Provide students with an understanding and knowledge about the internal structure of different plant organs, tissues and cells. 2-Provide students with an understanding of basic principles of plant physiology. 3-Acquire students an explanation the metabolic pathways in the plant; photosynthesis, respiration.
٣ المستهدف من التدريس المقرر:		
أ.المعلومات والمفاهيم:	a- Knowledge and Understanding : On completing this course, students will be able to: a1. Explain of different types of plant cells and tissues. a2. Recognize the internal structure of different plant organs; root, stem leaves. a3. Acquire an understanding of the relation of colloidal systems to plant cell. a4. Explain of osmosis, diffusion, plant – water relations. a5. Define enzymes and explain how respiration and photosynthesis occur.	
ب.المهارات الذهنية	b- Intellectual Skills: On completing this course, students will be able to: b1. Differentiate between the various structural features of plant cell and different types of tissues. b2. Distinguish between the anatomical structure of root, stem and leaves. b3. Differentiate between imbibitions, osmosis and diffusion. b4. Interpret light and dark reactions in photosynthesis. b5. Construct respiration process and enzyme action.	
ج- المهارات المهنية الخاصة بالمقرر:	c-Professional and Practical Skills: On completing this course, students will be able to: c1. Apply microscopic examination and identification of different types of cells, tissues as well as transverse and longitudinal sections of different plants c2. Prepare and examine plant samples; thin sections and staining. c3. Critically apply knowledge to comment various physiological experiments. c4. Apply experiments to demonstrate plant – water relations and enzyme action.	
د- المهارات العامة :	d-General and Transferable Skills: On completing this course, students will be able to: d1. Use information technology (IT) to prepare, process and present	

information.			
d2. Be a team worker and know the ethics of scientific work.			
Plant Anatomy : Introduction and historical review of structure of plant cell Types of plant tissues Anatomy of roots Anatomy of stems Anatomy of leaves Plant Physiology: Cytoplasm and its physical and chemical properties colloids / osmosis diffusion / imbibitions Permeability / water relations Enzymes photosynthesis / respiration			٤ محتوى المقرر:
4 - Teaching and Learning Methods 4.1 - Lectures with discussion.(3hours) 4.2 - Practical sessions including laboratories (4 hours).			٥ أساليب التعليم والتعلم:
The same as normal students, only skeletal disabilities are allowed in the Faculty of Science.			٦ أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة:
			٧ تقويم الطلاب :
Student Assessment Methods			أ- الأساليب المستخدمة :
Written exam.	to assess	a1,a2, a3, a4, a5& b1, b3,b4,b5	
Oral exam	to assess	a1,a3, a4, a5& b3, b5	
Practical exam	to assess	b2&c1, c2, c3, c4	
Assessment Schedule			ب- التوقيت :
Assessment 1	Week #	14	
Assessment 2	Week #	14	
Assessment 3	Week #	13	
Weighting of Assessments			ج- توزيع الدرجات :
Final-Term Examination	70		
Oral Examination	10		
Practical Examination	20		
Semester work	0		
Other types of assessment	0		
Total	100%		
			٨- قائمة الكتب الدراسية والمراجع :
Course notes in Plant Anatomy for 1st year Biology Students.			أ- مذكرات:
K. Esau (2006): Plant Anatomy, J. Wiley, Hoboken, N.J.			ب- كتب ملزمة
Jain, V.K. (2009): Fundamentals of Plant Physiology. S. Chand, Ram Nagar.			ج- كتب مقترحة :
http://www.uri.edu/artsci/bio/plant_anatomy/			د- دوريات علمية أو

نشرات..	
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مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	اسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
<u>Plant Anatomy</u>					
Introduction and historical review of structure of plant cell	1,2,3,4	a1	b1	c1	
Types of plant tissues:	5,6	a1	b1	c1	d2
Anatomy of roots	٧,8,9	a2	b2	c2	d1
Anatomy of stems	10,11	a2	b2	c2	d1,d2
Anatomy of leaves	12,13,14	a2	b2	c1,c2	d1
<u>Plant Physiology</u>					
Cytoplasm and its physical and chemical properties	١	a3	b٣	c3	
colloids / osmosis	3,4,5	a3	b٣	c3,c4	d2
diffusion / imbibitions	6,7,8	a4	b٣	c3	d1,d2
Permeability / water relations	9,10	a4	b٣	c4	d1
Enzymes	11,12	a5	b4,b5	c4	d1
photosynthesis / respiration	13,14	a5	b4,b5	c4	d1,d2

رئيس مجلس القسم العلمي :أ.د./ محمد نجيب حسنين

أستاذ المادة: د. عبد الرحمن سليمان