جامعة / المنصورة
كـــلية / العلـــوم
قـــســـم:علم النبـــــات

توصيف مقرر دراسى

١- بيانات المقرر		
الرمز الكودى : Botany (1)	اسم المقرر: Plant ecology, soil, Plant taxonomy Economic Botany	المستوى : الثانى (بيولوجي)
التخصص: علوم البيئة	عدد الوحدات الدراسية: ٨ نظرى ٤ تمارين ٠ عملى ٤	

٢- هدف المقرر:	For students undertaking this course, the aims are to: 1. Develop a set of skills that enable student to understand the reciprocal relationship between plants and environment and build a vision about the different ecosystems in Egypt and its characteristic features. 2. Acquire an understanding of historical and modern plant taxonomic principals and methods of flowering plants classification. 3. Gain an appreciation of the plants economic significance, technological applications and its role in our life.
٣- المستهدف من التدريس المقرر:	
ا.المعلومات والمفاهيم:	a- Knowledge and Understanding : On completing this course, students will be able to: a1. Explain of the recent trends of vegetative ecology and elucidate the role of the edaphic factor (soil) as a part of the environment that affects plant. a2. Classify plants using taxonomic keys including terminology and studying representative families of monocots and dicots. a3. Explain the different uses, applications, plant feedstock industries.
ب.المهارات الذهنية	b- Intellectual Skills: On completing this course, students will be able to: b1. Construct several related integrated information to confirm plant vegetation features and its ecosystem, follow the successive stages of evolution of plant communities. b2. Differentiate and recognize the characteristic features of different plant families according to their similarities. b3. Critically assesses the role of plants and microorganisms in the human welfare. b4. Evaluate the impact of plants and microorganisms on life as food, energy, feedstock for several industries.
ج- المهارات المهنية الخاصة بالمقرر:	c-Professional and Practical Skills: On completing this course, students will be able to: c1. Analyze soil, in order to evaluate its nutrients and physical properties to know the type of soil. . c2. Collect plants from its natural habitats and dissecting and examining its flowers and studying the morphology, inflorescences, and flowers, examine fruits of plants and classification according to their similarities. c3. Collect information and summarize certain topics in economic uses of

plants citing them in appropriate manner with supporting references.	
d-General and Transferable Skills: On completing this course, students will be able to: d1. Use the Information technology in preparing scholar researches on some plants having economic value and significance in plant biotechnology. d2. Work effectively in team and communicate with others positively. d3. Acquire the life-long learning and solving the problems concerning the community – linked problems.	د- المهارات العامة :
Plant Ecology: A-Vegetation: Vegetation ; Fundamentals of plant ecology / Evolution of vegetation Hydrosere succession / Xerosere succession Classification of plants according to their water content. B- B- Soil: Definition and parent material of soil Components of soil / Soil formation / Soil texture Soil properties; Physical & chemical properties Soil solution and Soil microorganisms Soil organic matter and humus C- Economic Botany: Classification of economic plants Active constituents of economic plants Industrial and medicinal uses of Microorganisms (Bacteria, Algae and Fungi) Industrial uses of higher plants (fiber, fodder, medicinal, wood, perfumes, oil, wax, rubber) D- Plant Taxonomy: Principals of plant taxonomy, Types and Structure of flowers, inflorescence and fruits Pollination / Fertilization Representative families of Monocots /Representative families of Dicots	٤- محتوى المقرر:
4 - Teaching and Learning Methods 4 -١. Lecture 4 hours. 4 -٢. Practical 4 hours.	٥- اساليب التعليم والتعلم:
The same as normal students, only skeletal disabilities are allowed in the Faculty of Science.	٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة:
	٧- تقويم الطلاب :
Student Assessment Methods	أ- الأساليب المستخدمة :

Final exam	to assess	a1, a2, a3 & b1, b2, b3,b4
Oral exam	to assess	a1, a2 , a3 & b1, b2, b3
Practical exam	to assess	c1, c2,c3,d1,d2,d3

Assessment Schedule	ب- التوقيت :

Assessment 1	**Week #**	**14**
Assessment 2	**Week #**	**14**
Assessment 3	**Week #**	**13**

ج- توزيع الدرجات :

Weighting of Assessments

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 :

أ- مذكرات:

Notes in plant economics.
Notes in plant ecology (vegetation and soil)
Taxonomy of flowering plants for second year students all issued and authorized by the department

ب- كتب ملزمة

- **M.A. Zahran (2009): Principles of Plant Ecology. Springer.Netherland.**
- **C. L. Porter (1969): Taxonomy of flowering plants. Eurasia Publishing House (pvt.) Ltd. New Delhi.**

ج- كتب مقترحة :

Pandey, B. P (1984): Economic Botany. S. Chand and Company. New Delhi.

د- دوريات علمية أو نشرات..

different web sites of the field of botany

مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسى

المحتويات للمقرر	اسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
Plant Ecology A-Vegetation					
Vegetation ; Fundamentals of plant ecology / Evolution of vegetation Hydrosere succession / Xerosere succession	**1,2,3,4,5,6,7**	**a1**	**b1,**		**d1**
Classification of plants according to their water content	**8,9,10,11,12**	**a1**	**b1**		**d1,d3**
B- Soil					
Definition and parent material of soil components of soil / Soil formation / Soil texture	**1,2,3**	**a1**	**b1**	**c1**	**d1,d3**
Soil physical & chemical properties	**4,5,6,7**	**a1**	**b1,b2**	**c2**	**d1**

Soil solution and soil microorganisms	**8,9,10,11**	**a1**	**b2**	**c2**	**d3**
Soil organic matter and humus	**12**	**a1**	**b1,b2**	**c3**	
Economic Botany					
Classification of economic plants	**1,2**	**a3**	**b3**		**d2**
Active constituents of economic plants	**3,4,5**	**a3**	**b3,b4**		**d1**
Industrial and medicinal uses of microorganisms (Bacteria, Algae and Fungi)	**6,7,8,9,10**	**a3**	**b4**		**d1**
Industrial uses of higher plants (fiber, fodder, medicinal, wood, perfumes, oil, wax, rubber)	**11,12,13,14**	**a3**	**b3,b4**		**d3**
Plant Taxonomy					
Principals of plant taxonomy, Types and structure of flowers, inflorescence and fruits	**1,2**	**a2**	**b3,b4**	**c2**	**d1**
Pollination / Fertilization	**3,4**	**a2**	**b3**	**c1**	**d3**
Representative families of Monocots /Representative families of Dicots	**5,6,7**	**a2**	**b3,b4**	**c2**	**d1,d3**
Fundamentals of plant ecology / Evolution of vegetation	**8,9**	**a2**	**b3**	**c2**	**d1**
Hydrosere succession / Xerosere succession	**10,11**	**a2**	**b3**		**-**
Classification of plants according to their water content .	**12,13,14**	**a2**	**b3**		**d3**

أستاذ المادة: أ.د.ابراهيم مشالي **رئيس مجلس القسم العلمى: أ.د. محمد نجيب حسني**