



Course Specifications

Course Title:	Economic Botany
Course Code:	442-BOT
Program:	Biology
Department:	Biology
College:	Science
Institution:	Jazan university

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A. Course Identification

1. Credit hours:			
2. Course type			
a.	University <input type="checkbox"/>	College <input type="checkbox"/>	Department <input checked="" type="checkbox"/>
b.	Required <input checked="" type="checkbox"/>	Elective <input type="checkbox"/>	Others <input type="checkbox"/>
3. Level/year at which this course is offered: 8 Level/ 4 Year			
4. Pre-requisites for this course (if any): Plant Taxonomy.. 342-Bot.			
5. Co-requisites for this course (if any): None			

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	13h	86.7
2	Blended	2h	13.3
3	E-learning		
4	Distance learning		
5	Other		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	15
2	Laboratory/Studio	30
3	Tutorial	-
4	Others (specify)	-
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description							
Course Title	Course No.	Credit Units			Year	Level	Pre-Req uisite
		Theoretica l	Practica l	Total			
Economic botany	442BOT	1	1	2	34 rd	8 th	
<p>1) Course Objectives: Study of plants in relation human benefits, economy, and industry</p> <p>2) Course Contents: Groups of Economic Plants – Fiber Plants (Anatomy of Fibers, Types of Fibers, Cotton, Flax, Wood Industry, Paper Industry, Synthetic Fibers, Nitrocellulose) – Oil Plants (Oil Storage in Plants, Oils, Waxes, Saponification, Rancidity, Soap Industry, Margarine Industry) – Aromatic</p>							



Plants (Volatile Oils, Perfume Industry) – Medicinal Plants (Medicines from Roots, Stems, Leaves, Flowers, Fruits, Seeds, Folk Medicine) - Sugar Plants (Sugars, Sugarcane, Beetroot, Sugar Industry, Starch Industry) – Fermentation (Alcohol fermentation, Lactic Acid Fermentation, Alcohol Industry, Dairy Industry, Vinegar Industry) – Hormones, Steroides, and Antibiotics)

3) Practical:

4) Assessment:

Exams: Essay/Objective, oral, class work, research work, translations

Practical: Identifying samples and slides, drawings.

Quiz 20%

Practical 30%

Final 50%

5) Teaching Methods:

Lectures, photographs, slides, multimedia, web-based learning. Samples, Light microscopes, glassware, chemicals.

6) Text Books:

7) References:

- Simpson B., Ogorzaly M. (2006) Economic Botany. John Wile, New York.

حسانين (2003) النبات الاقتصادي..المكتبة الاكاديمية..القاهرة

www.waynesword.palomar.edu.econpls.htm

www.faculty.ucr.edu/

2. Course Main Objective

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This course aims at giving the student knowledge in the fields:

- Groups of economic plants.
- Food and fodder
- Oil and Fiber.
- Aromatic and Medicinal Plants
- Volatile oils and their uses.
- Processes of the manufacture of sugar and vinegar.
- Role plants as basis of industrialization in developing countries.
- Role plants as basis of industrialization in local community.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge and Understanding	
1.1	Define all principals, concepts, theories and aspects concerning with Economic botany	K1,1
1.2	List all characteristics, importance, features, steps of Economic botany aspects.	K1,3
1.3	Explain all processes, mechanisms, definitions, theories, mode of actions of all Economic botany aspects.	K2, 2



CLOs		Aligned PLOs
1.4	Interpret by using your knowledge and understanding some of biological phenomena	K3,2
2	Skills :	
2.1	Examine theoretically or practically the slides, photos, diagrams or statements of biological aspects	S1,3
2.2	Write a report about any practical or theoretical tasks related to biological science.	S3,3
2.3	Prepare well-organized written scientific document, using appropriate media, with introduction, body, and conclusions	S4,3
3	Values:	
3.1	Access multiple sources of information, capture essential information, and distinguish it from extraneous	V1,3

C. Course Content

No	List of Topics	Contact Hours
1	Economically Important Plants.	1
2	Food and fodder Carbohydrate producer	3
3	Sugar Plants: Sugar Cane, Beet root	1
4	Protein Producer plant	2
5	Fiber Plants	2
6	Aromatic Plants: Volatile Oils, Characteristics, Industry.	2
7	Oil Plants: Fatty Oils and Soap and margarine Industry.	2
8	Final exam	2
Total		15

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge and Understanding		
1.1	Define all principals, concepts, theories and aspects concerning with Economic botany	Lectures	Quizzes, MCQs, Short Answer Question Oral exam
	List all characteristics, importance, features, steps of Economic botany aspects.	Lectures	
	Explain all processes, mechanisms, definitions, theories, mode of actions of all Economic botany aspects.	Lectures	
1.2	Interpret by using your knowledge and understanding some of biological phenomena	Lectures	Short Answer Question Quizzes, MCQs,
2.0	Skills		



Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
2.1	Examine theoretically or practically the slides, photos, diagrams or statements of biological aspects	Lectures, Lab work	Problem Solving Questions Assignments Lab work assessment
2.2	Write a report about any practical or theoretical tasks related to biological science.	Lectures, Lab work	Problem Solving Questions Assignments Lab work assessment
2.3	Prepare well-organized written scientific document, using appropriate media, with introduction, body, and conclusions	Lectures Lab work	Quiz Assignment
3.0	Values		
3.1	Access multiple sources of information, capture essential information, and distinguish it from extraneous	Web-based assignments	Assignment

2. Assessment Tasks for Students

#	*Assessment task	Week Due	Percentage of Total Assessment Score
1	Written assignment	3	3
2	Group assignment	4	2
3	Theoretical quiz	5	5
4	Mid-term exam	7	10
5	Practical Mid-term exam	9	10
6	Practical assignment	11	5
7	Final practical exam	13	15
8	Final Exam	15	50

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

10 Office hours/Faculty/week

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	حسانين (2003) النباتات الاقتصادية..المكتبة الاكاديمية..القاهرة
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Essential References Materials	- Simpson B., Ogorzaly M. (2006) Economic Botany. John Wiley, New York.
Electronic Materials	www.waynesword.palomar.edu.econpls.htm www.faculty.ucr.edu/
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation Classrooms, laboratories, demonstration (rooms/labs, etc)	1 Lecture room(s) for groups of 50 students.
Technology Resources AV, data show, Smart Board, software, (.etc)	1 Laboratory for group of 25 students.
Other Resources Specify, e.g. if specific laboratory equipment is required, list requirements or (attach a list)	AV, data show, Smart Board

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching		
Effectiveness of assessment		
Extent of achievement of course learning outcomes		
Quality of learning resources		

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	

