

SULTAN QABOOS UNIVERSITY COURSE OUTLINE

PROGRAM: Bachelor of Science in Plant Sciences

1.	Course Code	PLNT4517					
2.	Course Title	Nursery and Greenhouse Management					
3.	Credits	3 Cr Hrs, 12 Cr Points, 6 ECTS					
4.	Pre-requisite Course(s)	PLNT30 CHEM2	11, PLNT3211, PLNT3512, PLNT35 101, CAMS3000, CAMS3001, CAMS	14, PLNT4540, PLNT4542; BIOL2101, 2003, CAMS2000			
5.	Co-requisite Course(s)						
6.	Equivalent Course(s)	CROP45	17				
7.	Incompatible Course(s)						
8.	Course Category	Univ	ersity Requirement	University Elective			
		Colle	ge Requirement	College Elective			
		🛛 Depa	rtment Requirement	Department Elective			
			alization Requirement	Specialization Elective			
		Other	(specify):				
9.	Course Owner	College:	CAMS	Department: Plant Sciences			
10.	Course Type	🗌 Lectu	re	Lecture/Lab			
		Lectu	re/Seminar	Lecture/Studio			
		Lectu	re/Tutorial	Lecture/Lab/Tutorial or Seminar			
		Tutor	ial	Laboratory (Practical)			
		Field	or Work Placement	Studio			
		Seminar		Internship			
		Workshop		Project			
11.	Language of Instruction	English					
12.	Course Description						
Thi croj plan grea croj	This is an advance course designed to familiarize students with the importance and management of nursery and greenhouse crops. This includes the study of greenhouse types, environment control, growing vegetables, hydroponics and ornamental plant materials under protected environment. It will offer detailed learning of plant growing medium, plant propagation, greenhouse construction, nursery and greenhouse management methods and entrepreneurship in greenhouse horticultural crops.						
IS.	Teaching/Learning Strates	gies					
Fiel Fiel Lab	Field labs. at Agricultural Experiment Station (projects) Field trips Lab. reports and home assignments Presentation						
14. Assessment Components and Weight [%]							
Quizzes 5			Practical 15	Other (specify):			
Homework assignments 10			Project 25				
\square In-term examination(s) 15			\boxtimes Final examination 30				
15.	15. Grading Method						
\boxtimes	A-F Scale Pass/Not passed						
16. Textbook(s) and Supplemental Material							

1. Boodley J. W. (1998). The Commercial Greenhouse, 2nd Edition. Delmar Publishers

2- Handout notes will be distributed to all registered students. However, the same will be available online on Moodle (moodle.squ.edu.om).

3- The following sites contain useful information about greenhouse production system.

D:\Green house and Nursery\Greenhouse & Hydroponic Vegetable Production Resources on the Internet.htm D:\Green house and Nursery\Texas Greenhouse Management Handbook _ Ornamental Production.htm http://www.iica.int/Eng/regiones/caribe/jamaica/IICA%20Office%20Documents/Greenhouse%20Production%20Handboo k.pdf http://rada.gov.jm/?p=496

http://www.epa.gov/agriculture/nurgreen.html

17.	17. Matching Course Objectives with Program Outcomes and SQU Graduate Attributes						
	SQU Graduate Attributes						
A.	SQU graduates should be able to:	В.	SQU graduates possess	C.	SQU graduates should		
1. 2. 3.	apply the knowledge and skills relevant to the specialization communicate effectively and use information and communication technologies critically analyze complex information and present it in simple	1. 2.	interpersonal communication skills and alignment with culture of international labour market to assist them in practical life and in living successfully skills and motivation for independent learning and engagement in lifelong learning and recearch		relish good citizenship qualities, be conscious of their national identity and be socially responsible, engage in community affairs and be mindful of		
	clear manner	3. 4.	work ethics and positive values, and intellectual independence and autonomy teamwork skills and display potential leadership qualities		contemporary issues.		

#	Intended Student Learning Outcome	Relevant Program Outcome(s)	Applicable Attribute(s)
1.	To emphasize the importance of crop production in greenhouses globally and in particular in Oman	A.1.1 Graduates will have knowledge and skills in crop sciences A.1.2 Graduates will have understanding of crop production systems in Oman	A1
2.	To enhance student's knowledge of crop production in greenhouse and challenges faced to protected horticulture production system	 A.1.4 Graduates will be able to identify and analyze problems related to crop production systems, and formulate realistic solutions A.3 Graduates will be able to analyze and interpret data, draw conclusion and propose solutions to different issues in crop production and protection 	A1, A3
3.	To familiarize the students with the specialized crops grown in greenhouse e.g. fruits, vegetables, ornamental and medicinal plants/herbs	A.1.2 Graduates will have understanding of crop production systems in Oman B.1 Graduates will be able to compete with high standards of academic integrity and professionalism on the national and international scenes	A1, B1
4.	To gain hands on experience in planting, plant nutrition, irrigation, plant protection, harvesting, post-harvest operations and marketing	B.2 Graduates will be motivated to engage in independent life-long learningB.4 Graduates will have the ability to build teams and work in team for target oriented tasks	B2, B4
5.	To understand plant propagation structures, seed dormancy	A.1.1 Graduates will have knowledge and skills in crop sciencesB.4 Graduates will have the ability to build teams and work in team for target oriented tasks	A1, B4

6.	Learn to establishing greenhouse crop production	entrepreneurship in	A.1.2 Graduates will have understanding of crop production systems in Oman A.1.3 Graduates will have an understanding of elements of the crop farming business	A1
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16. Student Responsibilities

It is the student's responsibility to know and comply with all University Academic Regulations relevant to participation in this course. These regulations specifically include attendance requirement and students' academic code of conduct.

For attendance, it is the student's responsibility to be punctual and to attend all classes.

Students are expected to perform their work with honesty and avoid any academic misconduct, which is defined as the use of any dishonest or deceitful means to gain some academic advantage or benefit. This can take many forms, including but not limited to, the following: copying, plagiarism, collusion and forging documents. For full details, please refer to the Undergraduate Academic Regulations and to the Student Academic Misconduct Policy.

Additionally, this course requires that you:

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COURSE INFORMATION					
Course Code PLNT4517 Course Title Nursery and Greenhouse Management					
Semester/Year	Spring	Section(s)	10, 11		
Day, Time, and Place TBD					
Course Coordinator Mumtaz Khan					
Office Location	AGR 1019	Office Hours	TBD		
(Room#1020)					
Office Tel. Ext. 1216 Email mumtaz@squ.edu.om					

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Tentative Schedule						
Week	Lecture #	Topic/Material to be covered	Assessment			
1	1	Course Outline – Introduction to greenhouse agriculture				
2	2	Greenhouse types, structure components and environment control				
3	3	Greenhouse construction engineering				
4	4	Nursery production, certification and registration system				
5	5	Selection of greenhouse crops and container and cut flowers crops				
6	6	Greenhouse and nursery business/economics,	Quiz, 5%			
7	7	Growing media (soil/soil less) preparation				
8	8	Field trip to the Tawoos, Agriculture Hydroponics Al-Barka and Rumais				
		Agriculture Research Cntre				
9	9	Nursery production and transplanting (propagation techniques)				
10	10	Plant protection (Diseases and insect pest management)	Mid test, 15%			
11	11	Greenhouse environment exploitation (light, temperature, humidity) in				
		relation to plant physiology				
12	12	Fertigation (mineral nutrients management), Fertilizers & their application				
13	13	Irrigation requirement estimation and system management				
14	14	Harvesting and post-harvest handling, Marketing and commercial greenhouse	Students project			
		business management	physical evaluartion			
			25%			
15	15	Revision of the course, queries related to course and exams & project	Final project			
		presentation	presentation & lab.,			
			field reports, 25%			
16	16	Final Exam	30%			
17						

APPENDIX A: INSTRUCTORS OF MULTIPLE SECTIONS							
Section	Instructor	Day, Time, and Place	Office Location and Extension	Email	Office Hours		

APPENDIX B: ADDITIONAL INFORMATION