



SULTAN QABOOS UNIVERSITY

COURSE OUTLINE

PROGRAM: Soil Sciences

1. Course Code	SWAE3002	
2. Course Title	Desertification & Land Restoration	
3. Credits	3 CR, 12 CP, 6 ECTS	
4. Pre-requisite Course(s)	SWAE 2201	
5. Co-requisite Course(s)	none	
6. Equivalent Course(s)		
7. Incompatible Course(s)		
8. Course Category	<input type="checkbox"/> University Requirement	<input type="checkbox"/> University Elective
	<input type="checkbox"/> College Requirement	<input type="checkbox"/> College Elective
	<input checked="" type="checkbox"/> Department Requirement	<input type="checkbox"/> Department Elective
	<input type="checkbox"/> Specialization Requirement	<input type="checkbox"/> Specialization Elective
	<input type="checkbox"/> Other (specify):	
9. Course Owner	College: CAMS	Department: SWAE
10. Course Type	<input checked="" type="checkbox"/> Lecture	<input type="checkbox"/> Lecture/Lab
	<input type="checkbox"/> Lecture/Seminar	<input type="checkbox"/> Lecture/Studio
	<input type="checkbox"/> Lecture/Tutorial	<input type="checkbox"/> Lecture/Lab/Tutorial or Seminar
	<input type="checkbox"/> Tutorial	<input type="checkbox"/> Laboratory (Practical)
	<input type="checkbox"/> Field or Work Placement	<input type="checkbox"/> Studio
	<input type="checkbox"/> Seminar	<input type="checkbox"/> Internship
	<input type="checkbox"/> Workshop	<input type="checkbox"/> Project
11. Language of Instruction	English	
12. Course Description		
<p>This course will provide students an understanding of the nature, causes and extent of desertification as the major environmental problem in Oman. The role of cropping (irrigated, rainfed and rangeland) in desertification control will be discussed. Learning from case studies of other countries could highly contribute to desertification control. Use of remote sensing, the direct/indirect causes of desertification, criteria for selecting desertification indicators and estimates of rates of desertification are discussed. Issues of importance to Oman such as soil and water salinity management will doubt be given particular emphasis since they can directly contribute to combating desertification and sustaining the already established farms thereby contributing to food security.</p>		
13. Teaching/Learning Strategies		
<p>a) Discussions during lectures, students will be encouraged to participate in the discussion during lectures. b) Field Trips & Videos b) Tests</p> <p>There will be two exams each of one hour duration. The two exams will count for 45% of the course mark. Students who fail to take any of these tests without a valid reason will receive a mark of zero. Student with a valid reason for not taking any of these exams will be allowed to take a makeup exam or other arrangements are possible.</p>		
14. Assessment Components and Weight [%]		
<input type="checkbox"/> Quizzes 7.5%	<input type="checkbox"/> Practical	<input type="checkbox"/> Other (specify):
<input type="checkbox"/> Homework assignments	<input checked="" type="checkbox"/> Project 7.5%	
<input checked="" type="checkbox"/> In-term examination(s) 42.5%	<input checked="" type="checkbox"/> Final examination 42.5%	
15. Grading Method		
<input checked="" type="checkbox"/> A-F Scale <input type="checkbox"/> Pass/Not passed		

16. Textbook(s) and Supplemental Material

National Action Programme (NAP) to Combat Desertification in the Sultanate of Oman prepared by Ministry of Regional Municipalities, Environment, and Water Resources in Collaboration with United Nation Environment Program / Regional Office of West Asia (UNEP/ROWA) in 1985
 ENVIRONMENT AND SUSTAINABLE DEVELOPMENT IN OMAN (Ministry of Environment & Climate Affairs)
 Reference Books: (These books are available at SQU library)

1. Desertification of Arid Lands by H.E. Dregne. Hardwood Academic Publishers GmbH. 1985.
2. The Threatening Desert by Alan Grainger. Earthscan Publications Ltd 1990.
3. Desert Development edited by Yehuda Gradus. D. Reidel Publishing Co.1985
4. Desertification: Natural Background and Human Mismanagement by Monique Mainguet. Springer-Verlag. 1991.

17. Matching Course Objectives with Program Outcomes and SQU Graduate Attributes**SQU Graduate Attributes**

A. SQU graduates should be able to: <ol style="list-style-type: none"> 1. apply the knowledge and skills relevant to the specialization 2. communicate effectively and use information and communication technologies 3. critically analyze complex information and present it in simple clear manner 	B. SQU graduates possess <ol style="list-style-type: none"> 1. interpersonal communication skills and alignment with culture of international labour market to assist them in practical life and in living successfully 2. skills and motivation for independent learning and engagement in lifelong learning and research 3. work ethics and positive values, and intellectual independence and autonomy 4. teamwork skills and display potential leadership qualities 	C. SQU graduates should <p>relish good citizenship qualities, be conscious of their national identity and be socially responsible, engage in community affairs and be mindful of contemporary issues.</p>
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#	Intended Student Learning Outcome /Course Learning Objective	Relevant Program Outcome(s)	Applicable Attribute(s)
1.	Learning how large areas of the Al-Batinah Region got desertified by Salinization	<ol style="list-style-type: none"> 1. Work independently and in team environments at national and international levels. 2. Learn emerging technologies and implement them for personal and employer's success. 	A3, A1, B1
2.	Understand the direct and indirect causes of desertification	<ol style="list-style-type: none"> 1. Work independently and in team environments at national and international levels. 2. Learn emerging technologies and implement them for personal and employer's success. 3. Continue professional development and advanced learning throughout the career 	A1, A3
3.	Determining the criteria for selecting desertification indicators determined	<ol style="list-style-type: none"> 1. Work independently and in team environments at national and international levels. 2. Learn emerging technologies and implement them for personal and employer's success. 	A1, A3
4.	Learning from other countries- Case Studies in Combating Desertification	<ol style="list-style-type: none"> 1. Work independently and in team environments at national and international levels. 2. Learn emerging technologies and implement them for personal and employer's success. 	A3

		3. Contribute to the welfare of the society at regional and global levels. 4. Continue professional development and advanced learning throughout the career	
5.	Combating Desertification as Key to Food Security	1. Work independently and in team environments at national and international levels. 2. Learn emerging technologies and implement them for personal and employer's success. 3. Contribute to the welfare of the society at regional and global levels.	A1
6.	Gain knowledge about the National Action Plan in Combating Desertification in Oman	1. Work independently and in team environments at national and international levels. 2. Learn emerging technologies and implement them for personal and employer's success. 3. Contribute to the welfare of the society at regional and global levels.	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:

COURSE INFORMATION			
Course Code	SWAE3002	Course Title	Desertification & Land Restoration
Semester/ Year	Spring 2018	Section(s)	10
Day, Time, and Place	Sunday & Thursday 10:00 to 11:20 a.m.		
Course Coordinator	Salim Ali Al-Rawahy		
Office Location	CAMS Annex Rm # 248	Office Hours	Sunday 11:40 to 12:40 a.m. Thursday 9:00 to 10:00 a.m.
Office Tel. Ext.		Email	

Tentative Schedule			
Week	Lecture #	Topic/Material to be covered	Assessment
1		Desertification: How It Occurs in Oman	
2		Degradation of Soil and Vegetation	
3		The Direct/ Indirect Causes of Desertification	
4		Estimates of Rates of Desertification	Quiz #1: 2.5%
5		COMBATING DESERTIFICATION Improving Crop Production including Cropping System Better Use of Water Better Use of Fertilizer Improving Land-Use Planning ENVIRONMENT AND SUSTAINABLE DEVELOPMENT IN OMAN (Ministry of Environment & Climate Affairs)	
6		EXAM I (Thursday, 15 th March, 2018)	21.25%
7		Combating Desertification- Key to Food Security	
8		Rural Solar Energy Development for economic opportunities in the drylands and combating desertification	
9		National Action Program to combat desertification in the Sultanate of Oman	Quiz #2: 2.5%
10		Experience of a local community in Kazakhstan in the fight against desertification	
11		Combating Desertification and Drought (UNCCD Report)	
12		EXAM II (Thursday 26 th April, 2018)	21.25%
13		Living with Salinity (Strategic Project "Mngmt of Salt-Affected Soils & Water for Sustainable Agriculture)	
14		Review	Quiz #3: 2.5%
15		Project Evaluation	7.5%
16		FINAL EXAM	16/5/2018 42.5%
17			

APPENDIX A: INSTRUCTORS OF MULTIPLE SECTIONS

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APPENDIX B: ADDITIONAL INFORMATION

Program Learning Outcomes

1. Work independently and in team environments at national and international levels.
2. Learn emerging technologies and implement them for personal and employer's success.
3. Contribute to the welfare of the society at regional and global levels.
4. Maintain the standards of health, safety, environment and professional ethics at work and society.
5. Continue professional development and advanced learning throughout the career