

Course Specifications

Course Title:	Impacts of Climate Change on Environment & Health		
Course Code:	ENS 403		
Program:	Environmental Sciences and Technology Program		
Department:	Environmental Sciences Department		
College:	Faculty of Meteorology, Environment and Arid Land Agriculture		
Institution:	King Abdulaziz University		







Table of Contents

A. Course Identification	
6. Mode of Instruction (mark all that apply)	3
B. Course Objectives and Learning Outcomes	
1. Course Description	4
2. Course Main Objective	4
3. Course Learning Outcomes	4
C. Course Content	
D. Teaching and Assessment5	
1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods	5
2. Assessment Tasks for Students	5
E. Student Academic Counseling and Support6	
F. Learning Resources and Facilities6	
1.Learning Resources	6
2. Facilities Required	6
G. Course Quality Evaluation	
H. Specification Approval Data7	

A. Course Identification

1. Credit hours: 2		
2. Course type		
a. University College Department x Others		
b. Required Elective x		
3. Level/year at which this course is offered:		
$8^{th}/4^{th}$ Year		
4. Pre-requisites for this course (if any):		
ENS 311		
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		
2	Blended	3	65%
3	E-learning (computer assisted instruction)	2	35%
4	Correspondence	-	-
5	Other	-	-

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contac	t Hours	
1	Lecture	30
2	Laboratory/Studio	-
3	Tutorial	-
4	Others (specify)	-
	Total	30
Other 2	Learning Hours*	
1	Study	
2	Assignments	5
3	Library	
4	Projects/Research Essays/Theses	-
5	Others (specify)	
	Total	35

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description:

This course covers the following topics:

- The course aims to provide the student with the necessary knowledge on the scientific basis for the causes of global warming and the human role behind it.
- It also aims to describe the ways in which climate change affects the environment and human health, locally and globally.
- The course also aims to explain the different adaptation and mitigation strategies to reduce the greenhouse gases emissions.

2. Course Main Objective

By the end of the course the student should be able to:

- Understand scientific facts and key concepts behind the topic of climate change.
- Recognize the causes of climate change and the interconnectedness of environmental factors.
- List the effects of environmental degradation in all fields due to climate change.

- List the effects on human health and point out groups most vulnerable to diseases due to climate change.

- Discus the positive and negative of different types of adaptation and mitigation.

- Describe the local and global efforts to reduce the risks of climate change impacts.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge:	
1.1	Describe climatic changes associated by environmental pollution.	
1.2	Recognize the impacts of climatic changes on human and environment	
2	Skills :	
2.1	Explain suitable methods for prevention of climatic changes due to environmental pollution.	
2.2	Summarize problems associated with specified topics.	
3	Competence:	
3.1	Demonstrate independent role and as part of a team.	
3.2	Assess resources, time and other members of the group.	
3.3	Analyze and evaluate results in contrast with others'	

C. Course Content

No	List of Topics	Contact Hours
1	The causes of global warming, its sources and the human role behind the	3
_	occurrence of this phenomenon.	
2	Environmental risks of climate change.	6
3 Health risks of climate change.		6
4	Existing and future challenges to reduce greenhouse gas emissions,	6
4	focusing on the energy consumption and available options.	
5	Effective strategies to respond to climate change, including adaptation and	6
3	mitigation, locally and globally.	
6	The role of the Intergovernmental Panel on Climate Change (IPCC).	
	Total	30

D. Teaching and Assessment

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

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods	
1.0	Knowledge			
1.1	Describe climatic changes associated by environmental pollution.	 In-class lectures, using data show, with handouts. Class discussion. Using data show to display photos, audio clips and videos from the Internet. 	 Short reports. homework assignments Periodic quizzes and the mid-term and final exams Oral feedback 	
1.2	Recognize the impacts of climatic changes on human and environment.			
2.0	Skills	•		
2.1	Explain suitable methods for prevention of climatic changes due to environmental pollution.	In-class assignmentsClass discussion.		
2.2	Summarize problems associated with specified topics.	Using internet websites to calculate sample size and methodology.	Reports	
3.0	Competence			
3.1	Demonstrate independent role and as part of a team.	In-class joint assignments	How a student cooperates with his mates in assigned tasks	
3.2	Analyze and discuss results of assignments			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Theoretical part is usually assessed via written	3rd, 7th, 10 th ,	
-	exams, including midterm exam & final exam	13th weeks	80%
2	assignemtns, short reports, active participating	All semester	20%

*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 :

Office hours 3 h / week

Communications through email, social media are allowed to give students more flexibility.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Climate Change and Human Health : Risks and Responses (2003). Editors: A. J. McMichael [et al.] ISBN 92 4 156248 X. World Health Organization (publisher). Available online: (<u>https://www.who.int/globalchange/publications/climchange.pdf?u</u> <u>a=1</u>)	
Essential References	The Intergovernmental Panel on Climate Change Reports (IPCC) (selected topics). Paul R. Epstein and Dan Ferber (2012): Changing Planet Changing Health: How the Climate Crisis Threatens Our Health and What We Can Do about It. University of California Press. ISBN 9780520272637.	
Electronic Materials	Relevant Internet websites.	
Other Learning Materials	Handouts (soft and hard)	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	- Lecture room including white board with max 20 seats.
Technology Resources (AV, data show, Smart Board, software, etc.)	Data show.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Course contents covering	Students (direct through meetings, or indirect using the central online questionnaires	Online questionnaire and Students- faculty meetings (advisory committee)

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Quality of teaching		Online questionnaire and students- faculty meetings (advisory committee)
Office hours commitment		Online questionnaire and Students- faculty meetings (advisory committee)

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	Dept. Council and Faculty Academic Accreditation Committee
Reference No.	
Date	April, 2021