



Jordan University of Science and Technology
Faculty of Agriculture
Natural Resources & Environment Department

NR411 Climate Change: Impact, Adaptation And Mitigation - JNQF Level: 7

Second Semester 2024-2025

Course Catalog

3 Credit Hours. Climate change poses the single largest, global threat to life on Earth, and yet the United States and our schools lag far behind the international community in educating and acting responsibly to mitigate the causes and effects of a warming planet.

Teaching Method: Blended

Text Book

Title	What we know about Climate Change
Author(s)	Emanuel, K
Edition	2nd Edition
Short Name	REF #1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
REF #2	Climate Change: The Facts.	Marohasy J (Editor). Authros: Abbot. J, et.al.	2nd Edition	

Instructor

Name	Prof. Maher Tadros
Office Location	C4L2
Office Hours	
Email	mtadros@just.edu.jo

Class Schedule & Room

Section 1:
 Lecture Time: Sun, Tue : 11:30 - 12:30
 Room: C5020

Tentative List of Topics Covered

Weeks	Topic	References

Weeks 1, 2	Introduction, Definition of weather and Climate, What might happen to Earth's Climate, Understanding Climate Concepts, Climate Adaptation, How and Why is Climate Changing, Climate Change and Energy, Conclusion.	From REF #1, From REF #2
Weeks 3, 4, 5, 6	The Elements of Weather and Climate, Temperature, Air Pressure, Wind Speed and Direction, Humidity, Precipitation, Visibility, Clouds, Sunshine Duration.	From REF #1, From REF #2
Weeks 7, 8	Atmosphere, Layers of Atmosphere, Troposphere, Stratosphere, Mesosphere, Ionosphere, Exosphere,	From REF #1
Weeks 9, 10, 11	Climate Change, Introduction, Measurements, How has Climate Changed, What is Climate Change?, Is Earth's Climate Changing, Causing The Climate Change, Natural and Human-Induced Causes.	From REF #1
Weeks 12, 13	Causes and Effects of Climate Change, Factors of causes, Factors of Effects, Initiatives for Action.	From REF #2
Weeks 14, 15, 16	The Greenhouse Effects, Earth's Climate in the Past, Greenhouse gases in the Atmosphere, What is an Ozone layer, Ozone Layer Depletion, Causes of Ozone Depletion, Solution of Ozone Layer Depletion.	From REF #1, From REF #2

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Participants will have reliable knowledge of the science behind climate change and the important role played by CO2 and other greenhouse gas (GHG) emissions. [10PLO3, 5PLO4, 5PLO6, 5PLO9] [10L7K1, 10L7S3, 15L7C4]	25%	
Knowledge of and the ability to describe the many impacts of climate change. [10PLO7, 10PLO8, 5PLO9] [10L7K1, 15L7S2, 10L7C1]	25%	
Learn about the global threat and the causes of climate change. [5PLO1, 5PLO2, 10PLO8, 10PLO9] [15L7K1, 10L7S3, 10L7C2]	25%	
Knowledge of the wide range of options to mitigate the effects of climate change as well as adaptive strategies for a warming planet. [10PLO4, 5PLO5, 5PLO6, 5PLO7] [10L7K1, 10L7S3, 15L7C1]	25%	

Relationship to Program Student Outcomes (Out of 100%)														
PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	MPLO1-K	MPLO2-K	MPLO3-S	MPLO4-S	MPLO5-C	MPLO6-C
4.17	4.17	10	15	5	10	15	18.33	18.33						

Relationship to NQF Outcomes (Out of 100%)					
L7K1	L7S2	L7S3	L7C1	L7C2	L7C4
32.14	10.71	21.43	17.86	7.14	10.71

Evaluation	
Assessment Tool	Weight
First Exam	30%
Second Exam	30%
Final Exam	40%

Policy	
Exams	All exams are closed book and notes. The final exam is comprehensive (covering all teaching materials). Incomplete exams need approval from the department chair and the faculty dean.
Cheating	Prohibited, and in case of cheating, the student will be subject to punishment in accordance with the university regulations
Attendance	Students are expected to attend all class meetings regularly. If the student is absent for more than 20% of the course, the student will be prevented from taking all subsequent exams and assigned an F (Failure) grade in the course (deprived by absence). This maximum includes both excused and unexcused absences.
Participation	Participation is highly encouraged
Withdraw	The student can withdraw from the course in accordance with the timeline defined by the university regulations

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