Jordan University of Science and Technology

Faculty of Institute Of Nanotechnology

Water, Energy And Food Nexus Department

WEF710 Water Resources: An Integrated Approach
First Semester 2025-2026

Course Catalog
3 Credit Hours. 3 Credit Hours. This course aims to examine water resources from scientific, economic, legal, and social perspectives. It focuses on water fundamentals, the water cycle, and changes in the cycle due to climate change. Water Quality, Groundwater and surface water hydrology, water ecosystem, Water economics, Water Conflict, Law and Governance. Water demand management. The Future of Water: Water Footprints and Virtual Water. Research and innovation aspects in the field of water resources and the WEF nexus.
Teaching Method: Blended

Text Book	
Title	Water Resources An Integrated Approach
Author(s)	Edited by Joseph Holden
Edition	2nd Edition
Short Name	1
Other Information	https://lccn.loc.gov/

Course References

Short name	Book name	Author(s)	Edition	Other Information
2	A Handbook for Integrated Water Resources Management in Basins	Global Water Partnership GWP	1st Edition	Published 2009 by the Global Water Partnership (GWP) and the International Network of Basin Organizations (INBO).
3	Principles and Practices of Integrated Water Resources Management	Stockholm International Water Institute (SIWI)	1st Edition	

Instructor	
Name	**Dr. Ayat Bouzieh**

Office Location	Institute of Nanotechnology
Office Hours	Sun : 10:00 - 11:00 Sun : 13:00 - 14:00 Mon : 10:30 - 11:30 Tue : 10:00 - 12:00 Wed : 10:30 - 11:30
Email	aabouzieh@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Mon : 13:00 - 15:00 Room: NANO 2

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	Water Basics	**Ch. # 1** From **1**
Week 2	The Changing Water Cycle	**Ch. # 2** From **1**
Week 3	Surface Water Hydrology	**Ch. # 3** From **1**
Week 4	Surface Water Quality	**Ch. # 4** From **1**
Week 5	Groundwater	**Ch. # 5** From **1**
Week 6	Aquatic Ecosystems	**Ch. # 6** From **1**
Week 7	Water and Health	**Ch. # 7** From **1**
Week 8	Potable Water and Wastewater Treatment	**Ch. # 8** From **1**
Week 9	Water Demand Plaining and Management	**Ch. # 9** From **1**
Week 10	Water Economics	**Ch. # 10** From **1**
Week 11	Water Conflict, Law and Governance	**Ch. # 11** From **1**
Week 12	Virtual Water	**Ch. # 12** From **1**
Week 13	The Future of Water	**Ch. # 13** From **1**

Evaluation	
Assessment Tool	**Weight**
Homework & Quizzes	10%
Midterm exam	30%
Term paper	10%
Final exam	50%

Policy	
Attendance	* Attendance is mandatory and will be recorded regularly. * Excellent attendance is expected. * Students who miss more than 20% of the classes will be dropped from the course as per JUST policy. * If you miss class, it is your responsibility to find out about any announcements or assignments you may have missed.
Cheating	Prohibited; The commitment of the acts of cheating and deceit such as copying during examinations, altering examinations for re-grade, plagiarism of homework assignments, and in any way representing the work of others as your own is dishonest and will not be tolerated. Standard JUST policy will be applied. المادة 7: إذا ضُبط الطالب أثناء الامتحان أو الاختبار متلبسا بالغش فتوقع عل?? العقوبات التال?ة مجتمعة: أ- اعتباره راسبا في ذلك الامتحان أو الاختبار. ب- الغاء تسج?ل? في بق?ة المساقات المسجل ل?ا في ذلك الفصل. ??ج- فصل? من الجامعة لمدة فصل دراسي واحد، و ?و الفصل التالي للفصل الذي ضبط ف.
Withdraw	The last day of courses withdrawal (without reimbursement of tuition fees) is the day before the 1st day of final examination period

Date Printed: 2025-10-20