



**The University of Jordan**

**Accreditation & Quality Assurance Center**

## **Course syllabus**

# **Water Resources Managements**



## 12. Course Coordinator:

1.	Course title	Water Resources Management
2.	Course number	<b>0335461</b>
3.	Credit hours (theory, practical)	3 hrs. ( Theory )
	Contact hours (theory, practical)	3 hrs. (Theory / week )
4.	Prerequisites/corequisites	Principles of Hydrogeology0305361
5.	Program title	B.Sc. in Environmental and Applied Geology
6.	Year of study and semester (s)	
7.	Final Qualification	Toward acquiring a B.Sc. in Environmental and Applied Geology
8.	Other department (s) involved in teaching the course	No other departments are involved
9.	Language of Instruction	English
10.	Date of production/revision	
11.	Required/ Elective	Required

*Office numbers, office hours, phone numbers, and email addresses should be listed.*

Office number: **Geo 307**  
Phone number (Office) : 009626 5355000 ext. 22254  
Cell: :00962796906169  
Office Hrs. : Sun, Tue, Thu , 10 - 11 am  
: Mon , Wed , 9:30-11 pm  
Email: [mkuisi@ju.edu.jo](mailto:mkuisi@ju.edu.jo)

## 13. Other instructors:

*No other instructors (currently)*

## 14. Course Description:

This course is about water resources, their complex relationship with the environment and the economy, and about the growing problem of water scarcity and the various options that exist to deal with this problem. The course examines how water is allocated between various competing



demands and explores the role that water plays in food security, public health, and other aspects of social and economic development.

The course gives particular attention to the ways in which economic concepts, methods and judgments can inform water resource management strategies and policy decisions that affect the resource. Economic efficiency in resource allocation is only one of many criteria used by policy makers to evaluate the appropriate approach to a given issue. However, the insights given by the application of economic theory are often ignored in the face of conflicts over the use of water.

#### **15. Course aims and outcomes:**

The objectives of the course are to facilitate an understanding of water resources and how it relates with the sustainability of our environment. The volume of knowledge in water resources is too vast to properly introduce in one semester. Therefore, we will provide an overview of the key concepts related this topic. Also this course will let the student understand how governmental policies at various levels interact to affect water quality and quantity and the effects of human actions on water availability and quality.

This course is designed to:

- (1) Acquaint students with the history and practice of water resources planning and management;
- (2) Provide examples of water resources planning protocols employed by various agencies and levels of government
- (3) Address the role of analytic methods in water resources planning processes
- (4) illustrate the roles of interdisciplinary teamwork, partnerships, and public involvement in planning and management processes;
- (5) Differentiate the roles of planners and decision makers; and
- (6) Present the elements of integrated water resources planning and management.



## 16. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Approaches to planning water resources management	1	Mustafa Al Kuisi	100%		<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
Objectives and concepts of planning water resources management	2	Mustafa Al Kuisi	100%	Quiz 1	<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
	3	Mustafa Al Kuisi	100%		<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
Planning and decision making	4	Mustafa Al Kuisi	100%	Quiz 2	<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
	5	Mustafa Al Kuisi	100%		<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
General Management techniques in water resources management	6	Mustafa Al Kuisi	100%	Quiz 3	<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
	7	Mustafa Al Kuisi	100%		<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
Environmental, education and research in water resources management	8	Mustafa Al Kuisi	100%	Midterm Exam	<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
	9	Mustafa Al Kuisi	100%		<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
Monitoring and evaluation of water projects	10	Mustafa Al Kuisi	100%		<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
	11	Mustafa Al Kuisi	100%	Quiz 4	<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
Management of water projects	12	Mustafa Al Kuisi	100%		<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
Water quality management	13	Mustafa Al Kuisi	100%		<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
Environmental impacts of water resources projects	14	Mustafa Al Kuisi	100%	Quiz 5	<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
Water Resources in Jordan	15	Mustafa Al Kuisi	100%		<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management
Final Exams	16			All Chapters Comprehensive	<b>Thanh and Biswas</b> (1990) Environmentally Sound Water Management



## 17. Evaluation Methods and Course Requirements (Optional):

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Your grade for this course will be based on exams and assignments (e.g. problem sets, laboratory training). Most of the assignments will require a considerable effort outside of class time. Be sure you budget enough time for this course

Your grade will be determined as follows:

Five Quizzes @ 2% each=10%

First Exam = 20%

Second Exam= 20%

Final Exam = 50%

Total 100%

## 18. Course Policies:

- Attendance Policy: attendance is mandatory. Class non-attendance usually results in poor grades.
- All students are expected to follow the policies of the Student Code of Ethics as outlined in the Student Handbook.
- During class lectures, please make sure that all cell phones and pagers are silenced or are in vibrate mode. If you need to answer an urgent call (except during an exam), please leave the class to speak on the phone.
- Please make sure to arrive at class on time, as entering late is a distraction to the students and instructor. Students arriving after an exam has already been passed out (without legitimate excuse) will lose 10 points on that exam, and will have less amount of time to finish the exam compared with the rest of the class.
- Cheating may, at my discretion, result in an **F** for the course.

Grading will not necessarily be “on a curve.” There is no expectation of what the average grade should be, nor what the grade distribution should look like. If everyone were to demonstrate outstanding understanding of all the material, then everyone deserves a grade of A (and I would be very happy to give each one of them)! I therefore encourage you to discuss the course material with each other to get the most out of the class.

### **B- Absences from exams and handing in assignments on time:**

Not turning assignments on time will result in getting a zero grade. (Monday from each week during the course)

### **C- Honesty policy regarding cheating, plagiarism, misbehavior:**

As decided by the regulations of the University of Jordan.

### **E- Grading policy:**

To pass this class, students must get at least 50%. The distribution of grades will vary depending on the student group, but the pass/fail grade is fixed. The A grade will not be



given if no student gets more than 90%. When the class was taught in Fall 2017 the scale was the as following:

Letter	
A	90-100
A-	85-89
B+	80-84
B	75-79
B-	70-74
C+	65-69
C	60-64
C-	55-59
D+	51-54
D	46-50
D-	41-45
F	0-40

### 19. Required equipment:

1. For lecturing: a data projector and white screen.
2. Student should have all necessary stationery with them.

### 20. References:

Required book (s), assigned reading and audio-visuals:

- A. Thanh and Biswas (1990) Environmentally Sound Water Management, Oxford University Press.

Recommended books, materials, and media:

- A. Andrew A. Dzurik, "Water Resources Planning," 3rd edition, Rowman & Littlefield Publishers, Inc., Savage, Maryland, 2002, ISBN 0-7425-1744-6.
- B. Neil S. Grigg, "Water Resources Management," McGraw-Hill Book Co., New York, 1996, 0-07-024782-X.
- C. Neil S. Grigg, "Water Resources Planning," McGraw-Hill Book Co., New York, 1985, 0-07-024771-4.
- D. Margaret S. Peterson, "Water Resources Planning and Development," Prentice Hall Inc., Englewood Cliffs, New Jersey, 1984, ISBN 0-13-945908-1.
- E. David C. Major and Roberto L. Linton, "Applied Water Resource Systems Planning," Prentice Hall Inc., Englewood Cliffs, New Jersey, 1979, ISBN 0-13- 043364-0.
- F. Lester R. Brown, et. al., "State of the World 1999," W. W. Norton & Company, New York.

### 21. Additional information:

Date: -----

Name of Course Coordinator: -----Signature: -----



Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- Signature: -----

Copy to:

Head of Department

Assistant Dean for Quality Assurance