



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

NR444 Agricultural Drainage

Second Semester 2019-2020

**Course Catalog**

2 Credit Hours. This course will cover the introduction in agricultural drainage, types of drainage systems, water flow toward the drainage systems, designing the drainage systems.

**Text Book**

<b>Title</b>	Drainage engineering
<b>Author(s)</b>	James N. Luthin.
<b>Edition</b>	1st Edition
<b>Short Name</b>	Ref#1
<b>Other Information</b>	Wiley Eastern

**Instructor**

<b>Name</b>	<b>Dr. Naji Almfleh</b>
<b>Office Location</b>	M1L1
<b>Office Hours</b>	Sun : 09:30 - 10:30 Sun : 11:30 - 12:30 Mon : 10:30 - 11:30 Mon : 11:30 - 12:30 Tue : 08:30 - 09:30 Wed : 10:30 - 11:30
<b>Email</b>	nmfleh@just.edu.jo

**Class Schedule & Room**

Section 1:

Lecture Time: Sun, Tue : 10:30 - 11:30

Room: G2123

**Tentative List of Topics Covered**

<b>Weeks</b>	<b>Topic</b>	<b>References</b>
Week 1	Introduction to agricultural drainage	<b>Chapter 1</b> From <b>Ref#1</b>
Week 2	Introduction to agricultural drainage	<b>Chapter 1</b> From <b>Ref#1</b>
Week 3	Soil water relation in agricultural drainage	<b>Chapter 2</b> From <b>Ref#1</b>
Week 4	Soil water relation in agricultural drainage	<b>Chapter 2</b> From <b>Ref#1</b>
Week 5	Hydraulics flow in canals and pipes	<b>Chapter 3</b> From <b>Ref#1</b>
Week 6	Hydraulics flow in canals and pipes	<b>Chapter 3</b> From <b>Ref#1</b>
Week 7	Water flow measurements in canals and pipes	<b>Chapter 3</b> From <b>Ref#1</b>
Week 8	Rainfall - runoff	<b>Chapter 4</b> From <b>Ref#1</b>
Week 9	Rainfall - runoff	<b>Chapter 4</b> From <b>Ref#1</b>
Week 10	Drainage problems and solutions	<b>Chapter5</b> From <b>Ref#1</b>
Week 11	Drainage problems and solutions	<b>Chapter 5</b> From <b>Ref#1</b>
Week 12	Static and dynamic flow	<b>Chapter 6</b> From <b>Ref#1</b>
Week 13	Static and dynamic flow	<b>Chapter 6</b> From <b>Ref#1</b>
Week 14	Designing drainage system	<b>Chapter 7</b> From <b>Ref#1</b>
Week 15	Designing drainage system	<b>Chapter 7</b> From <b>Ref#1</b>

**Relationship to Program Student Outcomes (Out of 100%)**

PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9

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