



Department of Soil and Water

College of Agriculture Engineering Sciences

Salahaddin University- Erbil

Subject: Soil Management technology

Course Book (Theoretical + Practical)

Third Year Students of Soil and Water Department

Lecturer's name Dr. Muslim Rasul A. Khoshnaw

Academic Year: 2023/2024

Course Book

1. Course name	Soil Management technology
2. Lecturer's in charge	Dr. Muslim R. Arab
3. Department/ College	Soil and Water\ Agriculture engineering sciences
4. Contact	muslim.khosnaw@su.edu.krd Tel: 009647504538564 Mrs. Drakhshan Rasul Abdulrahman drakhshan.abdulrahman@su.edu.krd Tel: 0750 412 9422
5. Time (in hours) per week	Theory: 2 Practical: 3
6. Office hours	Daily from 8:30am to 2:00pm
7. Course code	
8. Teacher's academic profile (Muslim R. Arab)	Muslim R. Arab has a Bsc in Soil and Water Science (Salahaddin Uni. 2006), Msc. in Plant nutrition and Fertility (Salahaddin Uni. 2010) and PhD. In Soil Chemistry (Salahaddin Uni. 2020). I'm a lecturer at Soil and Water Dept. Agriculture engineering sciences.
Msc. Drakhshan Rasul Abdulrahman	Drakhshan Rasul Abdulrahman I am holding BSc degree in soil and water Science department/College of agriculture from Salahaddin University since 2009, and working as a Demonstrator in the Department of Soil and Water Science/College of agriculture at Salahaddin University for three years. MSc degree in Soil Science (Soil Survey and Management) College of agriculture from Salahaddin University in 2015.
9. Keywords	Soil Management, Soil Capability, Soil Conservation
10. Course overview:	<ul style="list-style-type: none"> • Soil management is lecture-tutorial based courses on the practical aspects of soil management for crop production as they relate to the physical, chemical and biological properties of soils. • The major emphasis is focused on soil fertility as related to field soil properties, fertilizer, lime, manure use, as well as soil and plant testing for nutrients.
11. Course objective:	Students will learn about <ul style="list-style-type: none"> – Soil: their origin and function – The Soil Management Assessment Framework: – Soil Quality and Soil Capability.

- Problems are associated with soil such as: Soil erosion, Land degradation, Acidic, Saline, Sodic, Alkaline, Fluffy paddy soil, Sandy soil, hard pan soil.....
- Management practices, such as waste disposal, tillage and rotation systems.....

12. Student's obligation

The student must have an important role:

- 1- Lecture attendance is compulsory.
 - 2-The students must contribute in the scientific discussions in the class or teaching hall.
 - 3-The students must know the importance of quizzes, homework, reports and exams.
- It is necessary to contribute the student in presenting a scientific subject

13. Forms of teaching

There are different forms of teaching:

- 1-Datashow and power point.
- 2- White board.
- 3-Lectures.
- 4- Learning Management System (moodle)

14. Assessment scheme

The course degree was divided as follow %50 of monthly exam, 15M for theoretical part 35M for practical part (15m for first test, 15m for second test and 5m for reports and activity) in theoretical part 5 marks for the first exam, % marks for second exam, 5 marks for daily quiz and preparing reports. Final exam takes %50, 50 marks for theory part only.

15. Student learning outcome:

Upon completion of the course, students are expected to:

- 1-Be familiar with the soils and their capability to sustain a range of land uses and management practices.
- 2- Understand and define soil problems and their management.
- 3- Be familiar with water logging and seeping.
- 4- Be familiar with plant nutrition and fertilizers management

16. Course Reading List and References:

De Freitas, V. H. (2000). Soil Management and Conservation for Small Farms: Strategies and Methods for Introduction, Technologies and Equipment: Experiences from the State of Santa Catarina, Brazil (No. 77). Food & Agriculture Org.

Blanco, H., & Lal, R. (2010). Soil and water conservation. Principles of Soil Conservation and Management. Springer, 2.

International Atomic Energy Agency (IAEA). (2011). Impact of soil conservation measures on erosion control and soil quality. IAEA-TECDOC-1665, Vienna.

Lal, R. (1998). Soil quality and agricultural sustainability. CRC press, USA.

<p>العكيدى, وليد خالد. (1990) إدارة التربة وأستعمالات الاراضي لطلبة المرحلة الرابعة و الدراسات العليا. مطابع دار الحكمة للطباعة والنشر, الموصل, العراق.</p>	
17. The Topics:	Lecturer's name
<p>1st week Introduction of soil science and land capability (Theory).</p> <ul style="list-style-type: none"> - Basic information (Practical). <p>2nd week Soil management and land uses (Theory).</p> <ul style="list-style-type: none"> - What is soil management? (Practical). <p>3rd week problem soil management (Theory).</p> <ul style="list-style-type: none"> - What is land use planning? (Practical). <p>4th week Soil pollution management (Theory).</p> <ul style="list-style-type: none"> - Goals of land use (Practical). <p>5th Week FIRST TEST.</p> <p>6th week Soil fertility management (Theory).</p> <ul style="list-style-type: none"> - What is land use change? (Practical). <p>7th week Soil erosion and land degradation (Theory).</p> <ul style="list-style-type: none"> - Types of planning land use (Practical). <p>8th week Soil conservation (Theory).</p> <ul style="list-style-type: none"> - Steps of land use (Practical). <p>9th week Irrigation system (Theory).</p> <ul style="list-style-type: none"> - Soil fertility management (Practical). <p>10th Week SECOND TEST.</p> <p>11th week Crop rotation (Theory).</p> <ul style="list-style-type: none"> - Tillage management (Practical). <p>12th week Desertification (Theory).</p> <ul style="list-style-type: none"> - Waste management (Practical). <p>13th course review.</p>	<p>Lecturer's name Dr. Muslim R. Arab (2hr)</p> <p>+</p> <p>Msc. Drakhshan Rasul Abdulrahman (3hr)</p>
18. Practical Topics (If there is any)	
<p>There are three main and important skills the students should learn, which are M. PowerPoint , M. Excel and M. Word that led them dealing with computer and internet</p>	<p>Lecturer's name Dr. Muslim R. Arab</p>

19. Examinations:

1. Compositional:

- A. 1-Definition?
- B. 2-explanation?
- C. 3- What are the differences between.. ?
- D. 4- Fill-in the blanks?
- E. Enumerate factors that affect.....

2. True or false type of exams:

3. Calculation:

20. Extra notes:

21. Peer review

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