



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

NR331 Rangeland Management

First Semester 2023-2024

Course Catalog

3 Credit Hours. This course covers various aspects of range management including; rangeland components and types, grazing management, stocking rate, plant physiology. We will focus on those processes that influence the function of rangeland ecosystems such as succession, disturbance (e.g., herbivory, fire, ...). Also, rangeland inventory and monitoring methods will be covered, in addition to the major rangeland rehabilitations methods.

Text Book

Title	Range management; principles and practices.
Author(s)	Holechek, J, L., R. D. Pieper, and C. H. Herbal.
Edition	6th Edition
Short Name	Range management
Other Information	

Instructor

Name	Prof. Moh"d Khair El-Shatnawi
Office Location	CEL2 17
Office Hours	Sun : 08:15 - 09:30 Mon : 09:30 - 10:30 Tue : 14:15 - 15:00 Thu : 08:00 - 10:30 Thu : 14:15 - 15:15
Email	mkhair@just.edu.jo

Class Schedule & Room

Section 1:

Lecture Time: Sun, Tue : 17:00 - 18:00

Room: متزامن الحضور منصة الكترونية

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	Rangeland and Man 1.Defintions 2.Importance of rangelands 3.Changes in the amount of rangelands 4.Range Management in Jordan	Lecture Notes & Holechek et al. 1998 From Range management
Weeks 3, 4, 5	II. Rangeland Physical Characteristics 1. Climate a. Precipitation b. Wind c. Temperature d. Frost-Free Period e. Humidity 2. Topography 3. Soils 4. Influences of rangeland physical characteristics upon range animal	Lecture Notes & Holechek et al. 1998 From Range management
Weeks 6, 7	III. Description of Rangeland Types Types of Rangeland & Manipulation of range vegetation a. Grasslands b. Desert Shrublands c. Savanna Woodlands d. Forests e. Tundra.	Lecture Notes & Holechek et al. 1998 From Range management
Weeks 8, 9	IV. Developmental Morphology and Physiology of Range Plants 1. Basic concepts 2. Carbohydrates Reserves 3. Plant Morphology 4. Resistance to Grazing 5. Grazing Optimization Theory	Lecture Notes & Holechek et al. 1998 From Range management
Week 10	VII. Livestock Distribution (READING) 1. Factors Causing Poor Distribution 2. Better Livestock Distribution Methods	Lecture Notes & Holechek et al. 1998 From Range management
Weeks 11, 12	V. Range Ecology and Ecosystem Processes 1. Rangeland Ecosystem Components and Functions 2. Succession and Climax 3. Drought 4. Competition	Lecture Notes & Holechek et al. 1998 From Range management
Weeks 13, 14	X. Range Animal Nutrition 1. Comparative Nutrition of Grazing Animals 2. Digestive Systems 3. Implications 4. Manipulation of grazing animal nutrition	Lecture Notes & Holechek et al. 1998 From Range management

Mapping of Course Outcomes to Program Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Describe the major rangeland types, importance to society and identify their physical characteristics [7PLO3, 7PLO6]	20%	Midterm, Quizzes
Identify the unique characteristics of range plants [4PLO3, 4PLO6]	10%	Midterm, Quizzes, Final

Know about habitats & range animals and nutrition [4PLO3, 4PLO4]	10%	Midterm, Quizzes, Final
Understand ecology of range communities & Explain basic factors that drive rangeland ecosystems [5PLO6, 5PLO9]	15%	Midterm, Quizzes, Final
Describe and synthesis plant growth response to grazing [4PLO3, 4PLO4]	20%	Quizzes, Final
Know how to improve range animals' distribution [3PLO4]	15%	Quizzes, Final
To introduce the range management terms, such as rangeland, rangeland ecosystems, range site, range and pasture [1PLO1, 1PLO5]	10%	

Relationship to Program Student Outcomes (Out of 100%)								
PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
5		30	30	5	22.5			7.5

Evaluation	
Assessment Tool	Weight
Midterm	40%
Quizzes	10%
Final	50%

Policy	
Attendance	According to JUST regulations, attendance is required at all scheduled class periods. The student is not allowed to miss more than 20% of lectures.
exams	All exams are closed book and notes. The final exam is comprehensive (covers all the material). Incomplete exams need approval from the department head and course instructor.
participation	The students are encouraged to participate in the ongoing classes discussion

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