**Range Improvements (602474) (3 credit hr)**

Department of Animal Production Pre-requisite: MNR 272

School of Agriculture 2nd Semester 2020/2021

The University of Jordan Time: 11-12:30 (M, W)

**Course description**

Selection of range improvements, restrictions on range improvements, planning range improvements, manipulation of range vegetation, revegetation of degraded rangelands, water- harvesting techniques, field assessment of range improvements.

**Objectives**

* To acquaint students with the basic principles of range improvements.
* To train students on planning of range improvements.
* To train students on participatory approach in dealing with pastoral communities.
* To train students on evaluation of range improvements.

**Lecturer:**

Professor Mahfouz “Mohammad Waheed” Abu-Zanat

**Textbook**

Range Development and Improvements, 3rd Edition, 1989, by J. Vallentine”.

|  |  |  |
| --- | --- | --- |
| Week | Subject | Reference |
| 1+2 | **Natural Rangelands (global scale)**  -Definition  -Location  -Importance (goods and Services)  **Natural Rangelands (Jordan)**  -Definition  -Location  -Importance (goods and Services) |  |
| 3 | **Characteristics of Rangelands**  -Physical  -Biological  -Socioeconomic |  |
| 4+5 | **Rangeland Degradation**  -Definition of degradation  -Expression of degradation (rate, type…)  -Drivers of degradation  -Symptoms of degradation  -Economic loss  **International Organizations Working on Rangeland Degradation** (UNCCD, UNEP, FAO, ICARDA, GEF, IFAD…) |  |
| 6+7+8+9 | **Improvement of Rangelands**  -Definitions (rehabilitation, restoration, desertification…)  **Non-structural Improvement**  -Enforcement of laws  -Amendments of acting laws  **Structural Improvement (SI)**  -Criteria of SI (physical, biological, economics)  -Types of SI (revegetation, water harvesting, water spreading techniques, soil amendments…)  **Effect of Range Improvement on Wildlife** |  |
| 10 | **Sustainable Improvement and Role of Local Community**  -Traditional institutions  -Land tenure  -Governance |  |
| 11+12+13 | **Evaluation of Improvement**  -Monitoring plan (parameters, measurement techniques)  -Evaluation (meeting objectives or not)  **Valuation of Interventions** |  |
| 14+15 | **Case Studies on Rangeland Improvement in Jordan** (BRP) |  |

**Course outcomes**

At the end of this course, students are expected to be able to:

* To understand the basic principles of range improvements.
* To prepare a plan for range improvements.
* To practice the participatory approach in dealing with communities.
* To evaluate the implemented range improvements.

Exams and homeworks

|  |  |  |  |
| --- | --- | --- | --- |
| Activity | Proportion | Time | Date |
| Exam 1 | 20% | 13:00-14:30 | Monday: 8 March 2021 |
| Exam 2 | 20% | 13:00-14:30 | Monday: 5 April 2021 |
| HWs (5x2) | 10% |  | February: 22, March: 15, 29, April: 12, 21 |
| Final Exam | 50% | TBD |  |