**The University of Jordan**

**Faculty of Agriculture Department of Horticulture and Cop Science**

**Program: Landscape and Floriculture Academic Year/ Semester**

**XERISCAPE 060136**

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| **Credit hours** | **3** | **Level** | **Third year** | **Pre-requisite** | **-** |
| **Coordinator/ Lecturer** | **Prof. Najib El Assi** | **Office number** | **290** | **Office phone** | **22346** |
| **Course website** |  | **E-mail** | **najibasi@ju.edu.jo** | **Place** | **189** |

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| **Office hours: Open-door-policy and pre-set appointments for long meetings** |
| **Day/Time** | **Sunday** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** |
| **Day** | **\*** |  | **\*** |  | **\*** |
| **Time** | **13:00-14:00** |  | **13:00-14:00** |  | **13:00-14:00** |

**Course Description**

**Xeriscape refers to landscaping in ways that reduce or eliminate the need for supplemental water from irrigation. It is promoted in regions that do not have easily accessible, plentiful, or reliable supplies of fresh water, and is gaining acceptance in other areas as climate patterns shift.** **The course will be divided into two main parts: the first part will discuss relevant background topics such as microclimate zoning, water use efficiency, and water harvesting; and the second part will deal with Xeriscape seven principles considered worldwide.**

**Learning Objectives**

1. Acquire the skills necessary to design functional and aesthetically pleasing Xeriscape project.
2. The ability to design an efficient irrigation system, including water harvesting system, to fulfill the plants in any Xeriscape project.

**Intended Learning Outcomes (ILOs):**

Successful completion of the course should lead to the following outcomes:

**A. Knowledge and Understanding:** Student is expected to

**A1- Gain the knowledge of the Xeriscape concept**

**A2- Understand the importance of water conservation**

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**B. Intellectual Analytical and Cognitive Skills:** Student is expected to

B1- Apply Xeriscape principles to landscaping

B2- Integrate water conservation techniques to landscape projects

**.….**

**C. Subject- Specific Skills:** Students is expected to

C1- Design Xeriscape projects using native and drought tolerant plants

C2- Estimate plant water requirements for any Xeriscape project

**.….**

**D. Transferable Key Skills:** Students is expected to

D1- Apply their knowledge of water harvesting in projects to meet the plant water requirements.

D2- Using the "climatic zone" as the backbone for the site planning.

D3- Divide areas into portions as "Hydro-zones" for proper irrigation.

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# ILOs: Learning and Evaluation Methods

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| **ILO/s** | **Learning Methods** | **Evaluation Methods** |
| **A. Knowledge and Understanding****(A1-A2)** | **Lectures and Discussions, Homework and Assignments, Presentation.** | **Exam, Quiz, presentation, assignments.** |
| **B. Intellectual Analytical and Cognitive Skills****(B3-B4)** | **Lectures and Discussions, Homework and Assignments, Presentation.** | **Exam, Quiz, presentation, assignments.** |
| **C. Subject- Specific Skills****(C5-C6)** | **Lectures and Discussions, Homework and Assignments, Presentation.** | **Exam, Quiz, presentation, assignments.** |
| **D. Transferable Key Skills****(D7-D9)** | **Lectures and Discussions, Homework and Assignments, Presentation.** | **Exam, Quiz, presentation, assignments.** |

**Course Contents**

|  |  |  |  |
| --- | --- | --- | --- |
| **Content** | **Reference**  | **Week** | **ILO/s** |
| **Xeriscape Concept** | Xeriscape Handbook, Gayle Weinstein, Fulcrum Publishing, Golden, Colorado, 1999 | **1st**  | **A1** |
| **Principles of Xeriscape*** Site planning & design
* Soil amendment & analysis
* Reduced turf areas
* Appropriate plant selection
* Efficient irrigation
* Use of mulches
* Appropriate maintenance
 | Xeriscape Handbook, Gayle Weinstein, Fulcrum Publishing, Golden, Colorado, 1999 | **2nd, 3rd, 4th**  | **B1** |
| * Estimating Water
* Requirements for Crops and Turf
* Estimating Water Needs for
* Landscape Plantings
* Using the Landscape
* Coefficient Formula
 | **Handouts** summarized from many resources, mainly:A Guide to Estimating Water Needs of Landscape Plantings in California, University of California, California Department of Water Resources, August 2000. | **5th , 6th, 7th , 8th**  | **D2** |
| * Using the Landscape
* Coefficient to Estimate Landscape
* Evapotranspiration
* Irrigation Efficiency and
* Calculating the Total Amount of Water to
* Apply
* Putting it all Together: A Worksheet for Calculations
* Using Water Estimates in
* Landscape Planning and Management
 | **Handouts** summarized from many resources, mainly:A Guide to Estimating Water Needs of Landscape Plantings in California, University of California, California Department of Water Resources, August 2000. | **9th, 10th, 11th, 12th, 13th**  | **A2, C1, C2, D3** |
| **Water Harvesting*** Simple Harvesting Systems
* Complex Harvesting Systems
* Calculating Demand
 | Patricia H. Waterfall, University of Arizona, 2006  | **14th, 15th, 16th**  | **A2, B2,D1** |

**Learning Methodology**

The course will be structured in lectures, discussions, theoretical and practical exercises. The course comprises overviews, from general understanding to expert knowledge on key topics, and learning is based on lectures as well as independent learning through exercises, presentations, and assignments.

# Evaluation

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| --- | --- | --- |
| **Evaluation** | **Point %** | **Date** |
| **Midterm Exam**  | 30% | 28/11/2013 |
| **Discussion** | 10% | In-class-discussion |
| **Assignments** | 5% | After each lecture |
| **Presentations**  | 5% | Prior to each lecture |
| **Final Exam**  | 50% | To be determined |

**Main Reference/s:**

Xeriscape Handbook, Gayle Weinstein, Fulcrum Publishing, Golden, Colorado, 1999

# References:

1. A Guide to Estimating Water Needs of Landscape Plantings in California, University of California, California Department of Water Resources, August 2000.
2. Patricia H. Waterfall, University of Arizona, 2006

**Intended Grading Scale (Optional)**

0-46 **F**

47-49 **D**-

50-52 **D**

53-58 **D+**

59-61 **C**-

62-64 **C**

65-70 **C+**

71-73 **B**-

74-76 **B**

77-82 **B+**

83-85 **A**-

96-100 **A**

**Notes:**

* Concerns or complaints should be expressed in the first instance to the module lecturer; if no resolution is forthcoming, then the issue should be brought to the attention of the module coordinator (for multiple sections) who will take the concerns to the module representative meeting. Thereafter, problems are dealt with by the Department Chair and if still unresolved the Dean and then ultimately the Vice President. For final complaints, there will be a committee to review grading the final exam.
* For more details on University regulations please visit:

 <http://www.ju.edu.jo/rules/index.htm>