

Course E-Syllabus

1	Course title	Plant Ecology
2	Course number	0304971
3	Credit hours	3 credit hours Theory
	Contact hours (theory, practical)	3 hrs weekly (two 90 min lectures per week)
4	Prerequisites/corequisites	None
5	Program title	PhD in Biological Sciences
6	Program code	04
7	Awarding institution	The University of Jordan
8	School	School of Science
9	Department	Department of Biological Sciences
10	Level of course	Graduate
11	Year of study and semester (s)	2021/2022 Spring semester
12	Final Qualification	NA
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Teaching methodology	On campus lectures
16	Electronic platform(s)	<input checked="" type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input checked="" type="checkbox"/> Others: emails
17	Date of production/revision	Feb, 2022

18 Course Coordinator:

Office number, office hours, phone numbers, and email addresses should be listed.
Prof Dr Said Damhoureyeh; 105 Biology; Ext. 22213; saidd@ju.edu.jo

19 Other instructors:

None

20 Course Description:

As stated in the approved study plan.

This class is best described as a graduate course in population and community plant ecology. The course focuses on concepts and theory applying to single populations, species interactions (e.g. competition, herbivory, mutualism...etc.), and the structure and dynamics of multi-species communities. These topics are explored through lectures and student presentations.

21 Course aims and outcomes:

A- Aims:

This course has two major aims to:

1. Understand the basic concept of plant population and how it is different from animals.
2. Understand the mechanism of plant population dynamics and the seed banks.
3. Understand the different types of mechanisms to regulate plant populations.
4. Understand the matrix models used in calculation of growth parameters.
5. Understand plant communities and their biotic interactions.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...

By the completion of this course, students will be able to:

1. Understand the term plant population.
2. Recognize the different types of plant population regulation.
3. Describe the basic methods of growth parameters and how to calculate them.
4. Understand the major problems that affect plant and seed population dynamics.
5. Understand plant communities' structure and the different processes within these communities.
6. Understand the processes of dynamics in succession (Equilibrium vs non-equilibrium processes).
7. presentations and scientific writing.

22. Topic Outline and Schedule:



*Plant Ecology (0304971)
Syllabus
3 Credit Hours*

Department of Biological Sciences

Week/ Lecture	Topic	SLO's	Teaching Methods*/platform	Evaluation Methods	References
1.1	Introduction	1	In-class lecture	Q & A	Different resources
1.2	Overview of the course and review of the structure and function of	1	In-class lecture	Q & A	Different resources

	ecosystems				
2.1	Population Ecology Introduction	1	In-class lecture	Q & A	Different resources
2.2	Concepts of Populations ecology	1, 2	In-class lecture	Q & A	Different resources
3.1	Population Dynamics, Processes	1, 2	In-class lecture	Q & A	Different resources
3.2	Demographic Processes and plant population dynamics	1, 2, 3	In-class lecture	Q & A	Different resources
4.1	Models and application,, Lefkovitch matrix	1, 2, 3	In-class lecture	Q & A	Different resources
4.2	Role of Seed banks	3, 4	In-class lecture	Q & A	Different resources
5.1	Life history patterns	1, 2, 3	In-class lecture	Q & A	Different resources
5.2	Reproduction and allocation	1, 2, 3	In-class lecture	Q & A	Different resources
6.1	Population structure	1, 2, 3	In-class lecture	Q & A	Different resources
6.2	Genetic variation	1, 2, 3	In-class lecture	Q & A	Different resources
7.1	Plant population regulations	1, 2, 3	In-class lecture	Q & A	Different resources
7.2	Plant species interactions	1, 2	In-class lecture	Q & A	Different resources
8.1	Types of interactions	1, 2	In-class lecture	Q & A	Different resources
8.2	Competition, types and patterns	5	In-class lecture	Q & A	Different resources
9.1	Plant-animal interaction	5	In-class lecture	Q & A	Different resources
9.2	Herbivory and seed Predation	1, 2, 3, 5	In-class lecture	Q & A	Different resources
10.1	Pollination and seed dispersal	1, 2, 3, 5	In-class lecture	Q & A	Different resources
10.2	Mutualistic relationships	1, 2, 3, 5	In-class lecture	Q & A	Different resources
11.1	Communities, structure and processes	1, 2, 5	In-class lecture	Q & A	Different resources
11.2	Diversity	1, 2, 5	In-class lecture	Q & A	Different resources
12.1	Equilibrium vs non-equilibrium processes	1, 2, 3, 4, 5, 6	In-class lecture	Q & A	Different resources
12.2	Vegetation sampling	1, 2, 3, 4, 5, 6	In-class lecture	Q & A	Different resources
13.1	Student presentations	7	In-class lecture Power point presentation	Q & A	Power point presentations using Teams
13.2	Student presentations	7	In-class lecture Power point presentation	Q & A	Power point presentations using Teams
14.1	Student presentations	7	In-class lecture Power point	Q & A	Power point presentations using

		presentation		Teams
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Teaching method: Synchronous lecturing

Evaluation methods include: Midterm Exam, Final Exam, In class discussion

Evaluation methods include: Term paper, Presentation

23 Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	Period (Week)	Platform
Midterm Exam	30		TBA	In-class exams
Final Exam	40	All topics	TBA	In-class exams
Term paper/ Presentations	30	Selected topics	Last week of teaching	In-class exams

24 Course Requirements (e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

students should have a computer, internet connection, webcam (When needed) , account on Microsoft Teams
overhead projectors.

25 Course Policies:

A- Attendance policies:

B- Absences from exams and submitting assignments on time:

C- Health and safety procedures:

D- Honesty policy regarding cheating, plagiarism, misbehavior:

E- Grading policy:

F- Available university services that support achievement in the course:

26 References:

A- Required book (s), assigned reading and audio-visuals:

No specific text book is required, however the following references will be helpful:

Plant Population Ecology, 2nd ed. by Silvertown, 1987

Terrestrial Plant Ecology by Barbour, Burk and Pitts, 1987

Population Ecology, 3rd ed. by Begon, Mortimer and Thompson, 1996

Methods in Comparative Plant Population Ecology by David Gibson, 2002

Supplementary references will be given throughout the semester for each subject and these will include papers, figures, tables and other handouts

B- Recommended books, materials, and media:

27 Additional information:

Name of Course Coordinator: Prof Said Damhoureyeh

Signature: ----- Date: **27/ 02/ 2022**

Head of curriculum committee/Department:

Signature: -----

Head of Department:

Signature: -----

Head of curriculum committee/Faculty:

Signature: -----

Dean:

Signature: -----

Copy to:

Head of Department

Assistant Dean for Quality Assurance

Course File