

# [Ecology] Syllabus

[First semester, 2018-2019]

## Instructor Information

**Instructor**

[M.Sc. Zahraa Radwan]

**Email**

[zahrad7@gmail.com]

**Office Location & Hours**

[Martyr Basel Al Assad Institute,  
8:00-18:00, Sat, 14:30-16:30. ed.]

## General Information

**Description**

The course covers the interrelations between plants, animals & surrounding environment, understanding the ecosystem, biochemical cycles, energy flow, environmental factors, population, communities and major biomes (ecosystems), continuous change of Earth over geological time, adaptation, natural selection, evolution, new organisms' species, biodiversity, environmental pollutions and their impact on environment and human, methods of combating pollution.

**Expectations and Goals**

By the end of his course, students will be able to:

1. Identify the most important environmental factors that affect organism and the extent of their impacts on living organism in surrounding environment.
2. Define biological diversity and understand its importance & impact on climate and human life.
3. Understand the basic elements' behaviors in different ecosystems and their cycles.
4. Know the most important environmental pollutants and their damaging effects on environment and human health systems.
5. Define natural disasters and their role in changing ecosystems and on the distribution of living organisms.

**Language(s) of Instruction:** Arabic

**Textbook(s) Language(s)** Arabic & English

**Course Materials****Required Text**

Principles of Ecology and Management, Alan Sitkin, Goodfellow Publisher, 2010.

Ecology and the Environment: Step-By-Step, Michel Francois, Gecko press, 2009.

Applied Ecology and Pollution, Damascus University publications, (in Arabic), 2008.

Principles of Floral Environment, Practical part Damascus University publications, (in Arabic), 2003.

### Course Schedule

	Week	Topic	Reading	Exercises
1	22/9/2018 25/9/2018	Introduction to Ecology	Pages from 1 to 8	
2	27/9/2018 4/10/2018	Sciences, matter and environment	Pages from 9 to 20	
3	6/10/2018 11/10/2018	Ecological systems	Pages from 21 to 28	
4	13/10/2018 16/10/2018	Water, carbon & nitrogen cycles	Pages from 29 to 34	Watching documentaries on elements transfer through different organisms
5	20/10/2018 23/10/2018	Phosphors & sulfur cycles	Pages from 35 to 36	Writing a report on elements transfer through different organisms after watching relevant documentaries
6	27/10/2018 1/11/2018	Biodiversity & evolution	Pages from 37 to 42	Watching documentaries on Biodiversity in Madagascar and Galapagos
7	3/11/2018 8/11/2018	Biodiversity interaction between species and its population	Pages from 43 to 47	Watching documentaries on biological relationships between Organisms
8	10/11/2018 15/11/2018	Environmental succession and human population census	Pages from 48 to 49	Rain-temperature of different areas
9	17/11/2018 22/11/2018	Biodiversity and climate	Pages from 50 to 53	Rain-temperature of different regions
10	24/11/2018 29/11/2018	Disasters and their types	Pages from 54 to 61	
11	1/12/2018 6/12/2018	Introduction to Pollution - Air Pollution	Pages from 62 to 72	Watching documentaries on ozone hole & global warming
12	8/12/2018 13/12/2018	noise Pollution	Pages from 73 to 80	
13	15/12/2018 20/12/2018	water and soil Pollution	Pages from 81 to 96	
14	22/12/2018 27/12/2018	Radioactive pollution and Environmental Carcinogens	Pages from 97 to 103	
15			Final Exam	

## Testing Schedule

test	Date	Subject	Reading	Type	language	% of final grade
Quiz 1	27/10/2018	Ecology, ecological systems, elements cycles1	Chapter/pp	MCQ & essay	Arabic	15%
Quiz 2	1/12/2018	Biodiversity, climate, organisms evolution, disasters	Chapter/pp	MC	Arabic	15%
Final	30/12/2018	All course's topics		MCQ	Arabic	70%

General notes:

