

SUBJECT OUTLINE DETAILS

1. Subject: Organism and Populations II

- Code: BS111C
- Credits: 3
- Hours: 45 theory hours, and 90 self-study hours.

2. Management Unit:

- Department: Biology
- College: College of Natural Sciences

3. Prerequisites: general biology 1 (BS110C)

4. Subject objectives:

4.1. Knowledge:

Students will develop knowledge and understanding of:

- 4.1.1. plant form and function including body organization, reproduction and development of plant, and factors effect on plant growth.
- 4.1.2. animal form and function by examining the levels of organization in the animal body and the systems for coordinating the activities of distinct body parts.
- 4.1.3. an overview of plant and animal diversity.

4.2. Skill: students will be able to

- 4.2.1. develop a fundamental understanding of modern biological principles that will be the basis for subsequent courses in the biological sciences.
- 4.2.2. apply investigative and problem-solving skills.
- 4.2.3. work individually and in teams

4.3. Attitude:

- 4.3.1. Students must have a positively sense in the self-learning and preparing before each session.
- 4.3.2. Students are encouraged to develop positive values and informed critical attitudes.
- 4.3.3. Students are aware of the importance of studying the general knowledge of biology to prepare for specialized subjects.

5. Brief description of subject content: This course will acquaint students with the body organization of organisms. Topic include the structure, functions and activities of plants and animals, the naming and classifying organisms. Student also get an overview on the diversity of organisms..

6. Subject content structure:

Contents	Hours	Objectives
Chapter 1. Plant form and function 1.1. Plant tissue 1.1.1. Meristem 1.1.2. Permanent tissues 1.2. Vegetative organs of flowering plants 1.2.1. Root 1.2.2. Stem 1.2.3. Leaf	3	4.1.1; 4.2.1; 4.2.2; 4.2.3; 4.3.1; 4.3.2; 4.3.3
Chapter 2. Reproduction of flowering plant 2.1. Asexual reproduction 2.2. Sexual reproduction 2.2.1. Alteration of generations in flowering plants 2.2.2. Flower structure 2.2.3. Gamete formation 2.2.4. Double fertilization 2.3. Seeds and Fruits 2.3.1. Seed formation 2.3.2. Seed germination 2.3.3. Dispersal of seed 2.3.4. Fruit formation 2.3.5. Type of fruits	3	4.1.1; 4.2.1; 4.2.2; 4.2.3; 4.3.1; 4.3.2; 4.3.3
Chapter 3. Plant response to stimuli 3.1. Plant hormones 3.2. Tropism 3.2.1. Phototropism 3.2.2. Gravitropism 3.2.3. Thigmotropism 3.2.4. Response to seasonal changes	3	4.1.1; 4.2.1; 4.2.2; 4.2.3; 4.3.1; 4.3.2; 4.3.3
Chapter 4. Viruses, Bacteria, and Archea 4.1. Introduction to Taxonomy 4.2. Viruses 4.2.1. Structure 4.2.2. Reproduction 4.2.3. Viral disease 4.3. Bacteria 4.3.1. Structure and reproduction 4.3.2. Metabolism 4.3.3. Ecological impact 4.4. Archea	6	4.1.1; 4.1.3; 4.2.1; 4.2.2; 4.2.3; 4.3.1; 4.3.2; 4.3.3
Chapter 5. Fungi and Lichen	6	4.1.1; 4.1.3;

<p>5.1. Structure of fungi 5.2. Reproduction of fungi 5.3. Fungal diversity 5.3.1. Chytrids 5.3.2. Zygomycetes 5.3.3. Glomeromycetes 5.3.4. Ascomycetes 5.3.5. Basidiomycetes 5.4. Roles of fungi 5.5. Lichen</p>		<p>4.2.1; 4.2.2; 4.2.3; 4.3.1; 4.3.2; 4.3.3</p>
<p>Chapter 6. Plantae 6.1. Protist 6.2. Slime molds 6.3. Algae 6.3.1. Unicellular algae 6.3.2. Dinoflagelates 6.3.3. Diatoms 6.3.4. Brown algae 6.3.5. Red algae 6.3.6. Green algae 6.4. Bryophytes 6.5. Gymnosperms 6.6. Angiosperms</p>	6	<p>4.1.1; 4.1.3; 4.2.1; 4.2.2; 4.2.3; 4.3.1; 4.3.2; 4.3.3</p>
<p>Chapter 7. Animal tissues 7.1. Epithelial tissue 7.2. Connective tissue 7.3. Muscle tissue 7.4. Nervous tissue</p>	3	<p>4.1.2; 4.2.1; 4.2.2; 4.2.3; 4.3.1; 4.3.2; 4.3.3</p>
<p>Chapter 8. Nervous system 8.1. Organization of nervous system 8.2. Cells of nervous system 8.3. Electric signals 8.3.1. Resting potentials 8.3.2. Action potentials 8.3.3. Action potential propagation 8.4. Synapse and synaptic transmission</p>	3	<p>4.1.2; 4.2.1; 4.2.2; 4.2.3; 4.3.1; 4.3.2; 4.3.3</p>
<p>Chapter 9. Material exchange 9.1. Circulation 9.2. Gas exchange 9.3. Obtaining nutrients 9.4. Waste disposal</p>	6	<p>4.1.2; 4.2.1; 4.2.2; 4.2.3; 4.3.1; 4.3.2; 4.3.3</p>
<p>Chapter 10. The animal diversity 10.1. Overview 10.2. Animal phylogeny 10.3. Major invertebrate phyla</p>	6	<p>4.1.2; 4.2.1; 4.2.2; 4.2.3; 4.3.1; 4.3.2; 4.3.3</p>

10.3.1. Sponges 10.3.2. Phylum Cnidaria 10.3.3. Phylum Platyhelminthes 10.3.4. Phylum Nematoda 10.3.5. Phylum Mollusca 10.3.6. Phylum Annelida 10.3.7. Phylum Arthropoda 10.3.8. Phylum Echinodermata 10.4. The Vertebrate genealogy 10.4.1. Fishes 10.4.2. Amphibians 10.4.3. Reptiles 10.4.4. Birds 10.4.5. Mammals		
--	--	--

7. Teaching method:

- Introducing and explaining.
- Providing supplements, media resources.

8. Duties of student:

- Lecture/Class attendance: not allow to absent more than 20% of lectures.
- Lab. Attendance: mandatory.
- Discussion and homeworks: mandatory

9. Assessment of student learning outcomes:

9.1. Assessment

No.	Point components	Rules and Requirement	Weights
1	Midterm exam	Tests	30%
2	Final exam	Tests	70%

9.2. Grading

- Grading components and final test scores will be marked on a scale of 10 (0 to 10), rounded to one decimal place.
- Subject score is the sum of all the components of the evaluation multiplied by the corresponding weight. The subject score is marked on a scale of 10 and rounded to one decimal place, then is converted to A-B-C-D score and score on a scale of 4 under the academic provisions of the University.

10. Materials:

Materials information

Code number

[1] Jane B. Reece, Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky, Robert B. Jackson, 2011. Campbell Biology, 9ed. Pearson Education, Inc.

[2] Raven P.H, Johnson G.B, Mason K.A, Losos j.B, Singer S.R Biology, 9 ed. 2010 McGraw Hill, NewYork.

570/ R253

[3] Sylvia S. Mader.2010 Biology. McGraw Hill, New York

570/ M181

11. Self-study Guide:

Week	Content	Theory (hours)	Students' duties
1	Chapter 1: Plant form and function	6	Reading: [2] chapter 36 [3] chapter 24
2	Chapter 2: Reproduction of flowering plant	6	Reading: [2] chapter 42 [3] chapter 27
3	Chapter 3: Plant response to stimuli	6	Reading: [2] chapter 40 [3] chapter 26
4-5	Chapter 4: Viruses, Bacteria, and Archea	12	Reading: [2] chapter 27 [3] chapter 20
6-7	Chapter 5: Fungi and Lichen	12	Reading: [2] chapter 31 [3] chapter 22
8-9	Chapter 6: Plantae	12	Midterm exam Reading: [2] chapter 30 [3] chapter 23
10	Chapter 7: Animal tissue	6	Reading: [2] chapter 43 [3] chapter 31
11	Chapter 8: The nervous system	6	Reading: [2] chapter 44 [3] chapter 37
12-13	Chapter 9: Material exchange	12	Reading: [2] chapter 48,49,50,51 [3] chapter 32,34,35,36
14-15	Chapter 10: The Animal Diversity	10	Reading: [2] chapter 32 [3] chapter 28,29
16	Final exam		

**ON BEHALF OF RECTOR
DEAN/ DIRECTOR**

Can Tho,/...../20...
HEAD OF DEPARTMENT