

## Tárgytematika / Course Description

### Zoology

MENB\_VKTA029

Tárgyfelelős neve /

Teacher's name: dr. Szabó Péter István

Félév / Semester: 2021/22/1

Beszámolási forma /

Assesment: Vizsga

Tárgy heti óraszám /

Teaching hours(week): 2/1/0

Tárgy féléves óraszám /

Teaching hours(sem.): 0/0/0

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### OKTATÁS CÉLJA / AIM OF THE COURSE

#### AIM OF THE COURSE

Innumerable small and large animals live in harmony in the diverse geographical, environment and climatic conditions of the world. Organisms of the same species living successfully under different environments become modified or adopted differently. As a result, from a common ancestor with diverse characters animals evolve. This diversification of organisms is called bio-diversity. So, the diversification found among the animals is known as Animal diversity. To survive and disseminate successfully under various geographical regions the diversities that have arisen among the animals through adaptations and essential modifications of their external and internal morphology, size, shape, behavior etc. is called animal diversity. Due to this diversification various species of animals have arisen in the world.

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### TANTÁRGY TARTALMA / DESCRIPTION

#### DESCRIPTION

1st. week: Introduction to Biology

2nd. week: Early earth and the origin of life; Major events in the history of life; Mechanism of Macroevolution; Phylogeny and the tree of life. Classifying the diversity of life. Kingdoms of Life –Prokaryotes, Eukaryotes, Archaea

3rd. week: Biodiversity non –chordata. General characters and outline classification of different phyla: Protozoa. Locomotion and reproduction in Protozoa. Metazoa Origin of metazoa, metamerism and coelom. Phylum Porifera. Structural organization of *Sycon*.

4th. week: Phylum Cnidaria. Polymorphism in Cnidarians; corals and coral reefs. Phylum Platyhelminthes. *Fasciola*: life history; parasitic adaptations and evolution of parasitism. Phylum Aschelminthes. Life history of *Ascaris* and its parasitic adaptations. Phylum Annelida. Adaptive radiations in Polychaeta.

5th. week: Phylum Arthropoda. Larval forms of crustacea; social life, moulting and metamorphosis in Insecta; vision in Arthropoda.

6th. week: Phylum Mollusca. Torsion and detorsion; modifications of shell and foot. Phylum Echinodermata. Water-vascular system and larval forms

7th. week: Biodiversity of Cordata. Protochordates. General features and Phylogeny of Hemichordates, Urochordates and Cephalochordates. Retrogressive metamorphosis. Agnatha. General features of living Agnatha and classification upto classes. Pisces. Classification of Placodermi upto subclasses, Chondrichthyes upto suborders and Osteichthyes upto orders. Osmoregulation, Migration and Parental care.

8th. week: Amphibia. Classification upto orders. Origin and evolution of terrestrial ectotherms, Parental care.

9th. week: Reptiles. Classification upto orders. Origin, Poisonous and non- poisonous snakes. Biting mechanism in snakes

10th. week: Reptiles II.

11th. week: Aves. Classification upto orders. Origin, Flight adaptations, Mechanism of flight and Migration

12th. week: Aves II.

13th. week: Mammals. Classification upto orders. Origin of Mammals.

14th. week: Mammals II.

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## **SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD**

### **ASSESMENT'S METHOD**

examination

The condition of the signature is participation in the lectures.

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**KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL**

**OBLIGATORY MATERIAL**

Barnes, R.D. Invertebrate Zoology (1982) VI Edition. Holt Saunders International Edition.

Szabó P. (edited, 2019): Zoology (manuscript)

Young, J.Z. (2004). The life of vertebrates. III Edition. Oxford university press