



Univerza v Mariboru  
University of Maribor

Fakulteta za naravoslovje in  
matematiko  
Faculty of Natural Sciences and  
Mathematics



### OPIS PREDMETA / SUBJECT SPECIFICATION

|                       |                                |
|-----------------------|--------------------------------|
| <b>Predmet:</b>       | <b>Splošna zoologija</b>       |
| <b>Subject Title:</b> | <b>Fundamentals of Zoology</b> |

| <b>Študijski program</b><br><b>Study programme</b> | <b>Študijska smer</b><br><b>Study field</b> | <b>Letnik</b><br><b>Year</b> | <b>Semester</b><br><b>Semester</b> |
|----------------------------------------------------|---------------------------------------------|------------------------------|------------------------------------|
| Biologija/Biology                                  | Biologija/Biology                           | 1                            | 2                                  |

**Univerzitetna koda predmeta / University subject code:**

| <b>Predavanja</b><br><b>Lectures</b> | <b>Seminar</b><br><b>Seminar</b> | <b>Sem. vaje</b><br><b>Tutorial</b> | <b>Lab. vaje</b><br><b>Lab. work</b> | <b>Teren. vaje</b><br><b>Field work</b> | <b>Samost. delo</b><br><b>Individ. work</b> | <b>ECTS</b> |
|--------------------------------------|----------------------------------|-------------------------------------|--------------------------------------|-----------------------------------------|---------------------------------------------|-------------|
| 45                                   |                                  |                                     | 45                                   |                                         | 90                                          | 6           |

**Nosilec predmeta / Lecturer:**

Tone NOVAK

**Jeziki /**

**Languages:**

**Predavanja /**

**Lecture:**

slovenski / Slovenian

**Vaje / Tutorial:**

slovenski / Slovenian

**Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:**

**Prerequisites:**



**Vsebina:**

Uvod, zgodovinski razvoj biologije  
 Živalska celica in njene posebnosti  
 Živalska tkiva: epitelno in žlezno tkivo, veziva in opornine, mišično tkivo, živčno tkivo, nenormalna tkiva  
 Zgradba in funkcija organskih sistemov in organov: koža, skelet, gibala, električni organi, svetilni organi, telesne votline, prebavila, dihalna, organi za transport snovi, izločala, čutila, živčevje, inkretorni organi, genitalni organi  
 Združevanje organizmov (kolonije, kormi, jate, črede, krdela)  
 Razmnoževanje in razvoj. Nespolno razmnoževanje. Spolno razmnoževanje: mejoza in gametogeneza, osemenitev, oploditev, embrionalni razvoj, postembrionalni razvoj, staranje, regeneracija in reparacija. Posebni načini razmnoževanja: partenogeneza, heterogonija, metageneza

**Contents (Syllabus outline):**

Introduction, history of biological science  
 Animal cell and its specificities  
 Animal tissues: epithelial and gland tissues, connective and skeletal tissues, muscle tissue, nervous tissue, abnormal tissues  
 Structure and function of organ systems and organs: integumentary system, skeleton, motion organs, electrical organs, lighting organs, body cavities, digestion organs, respiratory organs, circulatory systems, excretion systems, sense organs, nervous system, endocrine systems, reproductive systems  
 Associations of animals: colonies, flocks, flights, flocks, herds  
 Reproduction and development. Asexual reproduction. Sexual reproduction: meiosis and gametogenesis, insemination, fertilization, embryo development, postembryonic development, aging, regeneration and reparation. Special ways of reproduction:

|  |                                              |
|--|----------------------------------------------|
|  | parthenogenesis, heterogony and methagenesis |
|--|----------------------------------------------|

#### **Temeljni študijski viri / Textbooks:**

- Solomon, E. P., L. R. Berg, D. W. Martin, 2005: Biology. Thomson Brooks/Cole-Thomson Learning, Belmont, USA.
- Štrus, J., 1999: Splošna zoologija. Študentska založba, Ljubljana.

#### **Cilji:**

- Pridobitev znanja o osnovnih zakonitostih življenja živali z vidika raznolikosti in obenem enotnosti

#### **Objectives:**

- Knowledge on fundamental principles of animal life in aspect of variation and uniformity.

#### **Predvideni študijski rezultati:**

##### **Znanje in razumevanje:**

- Obvladovanje osnovnih metod eksperimentalnega dela v zoologiji
- Seznanitev s strukturo in funkcijo od celice do organizma
- Razumevanje strukturnih prilagoditev, življenjskih procesov in življenjskih ciklov pri živalih

##### **Prenesljive/ključne spretnosti in drugi atributi:**

- Obvladovanje dela z optičnim mikroskopom
- Sekcija manjše živali
- Poznavanje osnovne zgradbe in funkcije živali od celice do organizma

#### **Intended learning outcomes:**

##### **Knowledge and Understanding:**

- Mastery in the fundamental experimental methods in zoology.
- Getting acquainted with structure and function from cell to organism.
- Understanding the structural adaptations, life processes and life cycles of animals.

##### **Transferable/Key Skills and other attributes:**

- Qualification for work with optical microscope.
- Section of a small animal.
- Fundamental knowledge on structure and function of animals from cell to organism.

#### **Metode poučevanja in učenja:**

- Predavanja
- Laboratorijske vaje

#### **Learning and teaching methods:**

- Lectures
- Laboratory excersises

#### **Načini ocenjevanja:**

Delež (v %) / **Assessment:**  
Weight (in %)

|                                                                                            |          |                                                                                                                  |
|--------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Kolokvij iz vaj</li> <li>• Pisni izpit</li> </ul> | 50<br>50 | <ul style="list-style-type: none"> <li>• Partial exam of laboratory exercises</li> <li>• Written exam</li> </ul> |
|--------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------|

***Materialni pogoji za izvedbo predmeta :***

- *Multimedijska predavalnica*
- *Laboratorij z mikroskopi in binokularnimi lupami*

***Material conditions for subject realization***

- *Lecture hall for multimedia presentations*
- *Laboratory with microscopes and binocular lenses*

***Obveznosti študentov:***

*(pisni, ustni izpit, naloge, projekti)*

- Kolokvij iz vaj
- Pisni izpit

***Students' commitments:***

*(written, oral examination, coursework, projects):*

- Partial exam of laboratory exercises
- Written exam