



Univerza v Mariboru
University of Maribor

Fakulteta za naravoslovje in
matematiko
Faculty of Natural Sciences and
Mathematics



OPIS PREDMETA / SUBJECT SPECIFICATION

Predmet:	Splošna zoologija
Subject Title:	Fundamentals of Zoology

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Izobraževalna biologija / Educational Biology		1	1

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Lab. work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30	-	-	30	-	120	6

Nosilec predmeta / Lecturer:

Jeziki / Predavanja / Lecture:
Languages: Vaje / Tutorial:

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

Prerequisites:

Vsebina:

Contents (Syllabus outline):

Uvod, zgodovinski razvoj biologije
 Tivalska celica in njene posebnosti
 Tivalska 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, dihala, 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, osemnitev, oploditev, embrionalni razvoj, postembrionalni razvoj, staranje, regeneracija in reparacija. Posebni načini razmnoževanja: partenogeneza, heterogonija, metageneza

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 \pm ivljenja \pm ivali z vidika raznolikosti in obenem enotnosti

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, \pm ivljenjskih procesov in \pm ivljenjskih ciklov pri \pm ivalih

Prenesljive/ključne spretnosti in drugi atributi:

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

Metode poučevanja in učenja:

- Predavanja
- Laboratorijske vaje

Načini ocenjevanja:

- Kolokvij iz vaj
- Pisni izpit

Delež (v %) /
Weight (in %)

50
50

Objectives:

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

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.

Learning and teaching methods:

- Lectures
- Laboratory exercises

Assessment:

- Partial exam of laboratory exercises
- Written exam

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