

Study Programme: Bachelor of Science in Biology
Course Unit Title: Plant Anatomy and Morphology
Course Unit Code: OBIO06
Name of Lecturer(s): prof. Jadranka Luković; prof. Lana Zorić; Ass. Prof. Dunja Karanović
Type and Level of Studies: Undergraduate academic studies
Course Status (compulsory/elective): Compulsory
Semester (winter/summer): Summer
Language of instruction: English
Mode of course unit delivery (face-to-face/distance learning): Face-to-face
Number of ECTS Allocated: 7
Prerequisites: -
<p>Course Aims:</p> <p>Acquisition of knowledge on the fundamentals of the development of vegetative organs and parts of the reproductive region, their morpho-anatomical structure, as well as the modes of plant reproduction.</p>
<p>Learning Outcomes:</p> <p>Mastering this course provides the foundation for other botanical disciplines. After successfully completing all pre-exam and exam obligations, the student will be able to:</p> <ul style="list-style-type: none"> • clearly distinguish the origin, structure, and function of meristematic and permanent tissues • describe in detail the structure and functions of vegetative organs and parts of the reproductive region • recognize the structural–functional coherence among individual organs and within the plant organism as a whole • explain the structure of individual plant organs in relation to the environmental conditions in which they develop • identify structural differences among plants based on their systematic affiliation • explain the types of reproduction and life cycles of plants.
<p>Syllabus:</p> <p><i>Theory</i></p> <p>Embryo. Ontogeny, function and classification of meristematic and permanent tissues (parenchyma, mechanical, dermal, vascular and secretory tissues). Anatomical structure of vegetative organs (root, stem, leaf) and their metamorphoses. Atypical thickening. Anatomical structure of parts of the reproductive region (flower, seed and fruit). Morphological structure of plants. Morphology of vegetative organs and their metamorphoses. Morphology of the parts of the reproductive region (flower, inflorescence, seed and fruit). Types of plant reproduction: asexual and sexual, alternation of generations. Life cycle of seed plants. Reproduction of angiosperms, pollination, fertilization, formation of seed and fruit. Fruit classification. Seed and fruit dispersion.</p> <p><i>Practice</i></p> <p>Embryo. Apical and lateral meristems. Permanent tissues: parenchyma, mechanical, dermal, vascular and secretory tissues. Primary and secondary structure of root and stem. Stem and leaf structure gymnosperms and angiosperms. Leaf anatomical structure of plants from different ecological groups. Anatomical structure of sepal, petal, anther and ovary, seed coat and pericarp. Root morphology. Root metamorphoses. Shoot morphology (stem and leaf). Shoot metamorphoses. Morphology of reproductive organs. Flower (parts, flower formulas and diagrams). Inflorescences (types, classification). Seed and fruit (parts, classification).</p>
Required Reading:

Evert, F.R. (2006): Esau's Plant Anatomy. John Wiley & Sons, Inc., Publication

Luković, J., Zorić, L. (2013): Morfologija biljaka. Symbol, Novi Sad.

Dickison C. W. (2000): Integrative Plant Anatomy, Harcourt academic press, New York, London.

Weekly Contact Hours:

Lectures: 3

Practical work:3

Teaching Methods:

lectures, practical work, consultations

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	Final exam	points
Colloquia	30	practical exam	20
		oral exam	50