

<b>Study Programme: Agronomy</b>
<b>Course Unit Title: Functional anatomy of forest trees</b>
<b>Course Unit Code: 19.AGR042</b>
<b>Name of Lecturer(s): Srđan Stojnić</b>
<b>Type and Level of Studies: PhD studies</b>
<b>Course Status (compulsory/elective): Elective</b>
<b>Semester (winter/summer): /</b>
<b>Language of instruction: English</b>
<b>Mode of course unit delivery (face-to-face/distance learning): Face-to-face and distance learning</b>
<b>Number of ECTS Allocated: 7</b>
<b>Prerequisites: /</b>
<p><b>Course Aims:</b></p> <p>The aim of the course that doctoral students, who already have studied plant anatomy in their undergraduate and/or master's studies, expand their knowledge about the trees anatomical structure. In addition to fundamental knowledge about the structure of different plant organs, emphasis will be placed on the functional anatomy of trees; i.e. connection between environmental factors and trees anatomical structure. Also, within the course, doctoral students will be able to gain knowledge about the relationship between physiological processes and the anatomical structure of trees, as well as the possibility of applying that knowledge in the selection and breeding of forest trees.</p>
<p><b>Learning Outcomes:</b></p> <p>Acquiring the necessary knowledge related to the influence of various abiotic (environmental) and biotic factors on the anatomical structure of various plant organs, as well as the possibility of using the anatomical structure of wood in selection and breeding of forest trees.</p>
<p><b>Syllabus:</b></p> <p><i>Theory</i></p> <p>1. Anatomical structure of root, stem and leaf of forest trees, 2. The influence of environmental conditions on the anatomical structure of different plant organs, 3. Influence of biotic factors on anatomical structure of trees, 4. Influence of abiotic factors on anatomical structure of trees, 5. Relationship between anatomical structure of different plant organs and physiological processes in plants, 6. Application of knowledge of anatomical structure in the selection and breeding of forest trees.</p> <p><i>Practice</i></p> <p>Consultations will be organized for doctoral students, where they will be able to get information about the subject itself, the literature, the possibilities of involvement in the implementation of experimental research, as well as the obligations they have in order to successfully pass the exam.</p>
<p><b>Required Reading:</b></p> <ul style="list-style-type: none"> <li>• Vilotić, D. (2000). Uporedna anatomija drveta. Univerzitetski udžbenik. Beograd.</li> <li>• Gajić, M. (2002). Šumska botanika sa anatomijom drveta. Drugo prerađeno i dopunjeno izdanje. Šumarski fakultet Univerziteta u Beogradu. Beograd.</li> <li>• Beck, C.B. (2010). An Introduction to Plant Structure and Development. Plant Anatomy for the Twenty-First</li> </ul>

Century Second Edition. Cambridge University Press. New York.

- Esau, K. (1977). Anatomy of seed plants. 2nd Edition. John Wiley & Sons. New York.
- Cutler, D.F., Botha, T., Stevenson, D.W. (2007). Plant anatomy: an applied approach. Blackwell Publishing Ltd. USA.

**Weekly Contact Hours: 8**

**Lectures: 4**

**Practical work: 4**

**Teaching Methods:**

Lectures combined with interactive teaching, seminars, consultations and mentoring work with students.

**Knowledge Assessment (maximum of 100 points):**

<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation		written exam	
Practical work		oral exam	70
Preliminary exam(s)		.....	
Seminar(s)	30		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.