

Study Programme: Fruitgrowing and viticulture
Course Unit Title: Grapevine biology
Course Unit Code:
Name of Lecturer(s): Full prof. Ivan D. Kuljančić and Asst. prof. Predrag N. Božović
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: 6
Prerequisites: Botany, Plant physiology, Biochemistry
Course Aims: Education and training of undergraduate students in the field of viticulture. Student must acquire basic knowledge about vines, grapevine and wine history, botanical systematics, morphology, anatomy, physiology and ecology.
Learning Outcomes: The formation of professionals with academic qualifications, which has an extended knowledge in relation to the knowledge acquired at the high school. Student must be prepared to upgrade his knowledge, in the field of viticulture, with the ultimate goal to use it in the field-in practice.
<p>Syllabus:</p> <p><i>Theory</i> Introduction: Importance of grapevine and its products. History of vines, grapevine and wine.</p> <p>Botanical systematics: general features of <i>Vitaceae</i> family, genera of family <i>Vitaceae</i>, genus <i>Vitis</i> and geographical group in it.</p> <p>Morphology and anatomy of vines and grapevine organs.</p> <p>Grapevine physiology: Photosynthesis, carbon dioxide uptake and assimilation, respiration, gas exchange (transpiration), Mineral nutrients – uptake and transport, Organic matter – synthesis and transport.</p> <p>Grapevine ecology: Heat (Influence of extremely low and high temperatures on grapevine, temperature sums, grapevine preparing for wintering), light (sun shining duration), soil and air humidity, winds, causes of climate diversity.</p> <p><i>Practice</i> Vine and grapevine vegetative and generative organs review, Anatomy of roots, shoots, trunk, leaves. Cold hardiness of vine and grapevine tissues and organs, propagation by cuttings and grafting-review.</p>
<p>Required Reading:</p> <p>Ivan D. Kuljančić and Predrag N. Božović: <i>Biologija i ekologija loza i vinove loze, te božanske biljke</i>. Prometej, Novi Sad, 2018.</p> <p>Ivan D. Kuljančić: <i>Vinogradarstvo, vinova loza, ta božanska biljka</i>. Prometej, Novi Sad, 2007.</p> <p>Aleksandar Nakalamić i Nebojša Marković : <i>Opšte vinogradarstvo</i>, Poljoprivredni fakultet i Zadužbina Svetog manastira</p>

hilandara, Beograd, 2009.

Marcus keller: The science of grapevines- anatomy and physiology, Elsevier-Academics Press, San diego, 2012.

Peter R. Dry, B. G. Coombe: Viticulture (Volume1), Resources, Adelaide, 2004.

Weekly Contact Hours: 40

Lectures: 60

Practical work: 30

Teaching Methods: Lectures, Practice/ Practical classes, Consultations, study, research work

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	Final exam	points
Active class participation	10	written exam	
Practical work		oral exam	60
Preliminary exam(s)	30	
Seminar(s)			

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