

DESCRIPTION OF A STUDY COURSE – SYLLABUS

Title of a course	Soil science				
Head of course	PhD Melita Zec Vojinović, Senior Lecturer				
Study programme	Professional undergraduate study Mediterranean Agriculture				
Status of a course	Obligatory				
Year of study	1	Semester	II	ECTS credits	4
Teaching plan (L + E + S+ Pr)	2+0+1+1				
Goals of a course					
To acquaint students with the physical, chemical and biological characteristics of soil, which will enable students to select measures that improve soil fitness and fertility and to produce Mediterranean cultures. To train students to sample soil and to calculate the required amount of macro elements for the production of Mediterranean crops.					
Conditions for enrolling course					
No conditions					
Learning outcomes on a level of a study programme which includes course					
<p>Outcome 2: Recommend the production technology for vegetables and medicinal plants outdoors and in protected areas according to the requirements of a certain species, and evaluate the quality of vegetables and aromatic herbs on the basis of internal and external quality.</p> <p>Outcome 3: Prepare a plan for the cultivation of Mediterranean crops, including economic and cultivation elements.</p> <p>Outcome 4: Perform the care of perennial plantations of Mediterranean crops in accordance with the cultivation form and maintain them in view of the technological and ecological conditions of production.</p> <p>Outcome 5: Design irrigation models based on water balance and apply classic and special irrigation models.</p>					
Expected learning outcomes on a level of a course					
<ol style="list-style-type: none"> 1. Predict the influence of physical, chemical and biological properties of soil on its production potential and fertility 2. Recommend soil repair measures to promote the production of Mediterranean crops 3. Conduct field research and sample soil for laboratory analysis 4. Recommend fertilization on the basis of chemical analysis of the soil of a particular production area 5. Evaluate soil for agriculture production of Mediterranean crops 					
Content of a course					
Definition of soil, ground and pedosphere. Factors of Mediterranean soil genesis. Mother substrate and mother rock, climate, relief, time, organisms. Soil genetic processes. Soil morphology. Specific features of Mediterranean agricultural soils. Physical features of soil. Texture, structure, density, porosity, consistency, water in soil, air in soil, heat characteristics. Chemical features of soil. Mineral substance, organic substance, fertility elements – macro and micro nutrients, oxide-reduction processes in soil, sorption, soil solution, puffers and puffing soil ability. Microbiological features of soil. Soil classification. FAO classification. Soil classification in Croatia with particular consideration of soil types appropriate for agricultural production. Soil spread according to Pedological map Scale 1:300.000. Soil degradation. Erosion. Saltening of soil. Decrease in soil fertility. Soil survey for different forms of agricultural production in Mediterranean region.					
Teaching modes	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> auditory exercises <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> distance learning <input type="checkbox"/> field classes		<input checked="" type="checkbox"/> individual assignments <input type="checkbox"/> multimedia and network <input type="checkbox"/> laboratory <input type="checkbox"/> supervisor's work <input type="checkbox"/> other _____		
Comments					
Students' obligations					

Grading, evaluation and monitoring of students' work continuously during lectures and exams

Grading is based upon evaluation of course's learning outcomes' adoption. Grading is performed continuously during lectures and/or during exam, in compliance with the provisions of Regulation on the assessment of students.

Continuous check-up:

Outcomes	Pre-exam I	Test	Demonstration	Assignment	Threshold	Max
Outcome 1	20				10	20
Outcome 2				20	10	20
Outcome 3			15		7.5	15
Outcome 4				25	12.5	25
Outcome 5		20			10	20
Percentage of ECTS	0, 5	1	0,5	2	2	4
Total	12,5%	25	12,5%	50%	50 %	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

Exam term:

Outcomes	Written exam	Oral exam	Max
Outcome 1	16	4	20
Outcome 2	25		25
Outcome 3	15		15
Outcome 4	20		20
Outcome 5	16	4	20
Percentage of ECTS	3,5	0,5	4
Total	90%	10%	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

Grading:

A student has passed the exam if he has acquired at least 50% of anticipated credits of a specific learning outcome.

If a student has passed learning outcomes of all courses, the accomplished credits (percentages) of all passed learning outcomes are being added, while the final grade is defined upon following table:

Range of credits (percentages)	Numerical grade	ECTS grade
90,00 – 100,00	Excellent (5)	A
75,00 – 89,99	Very good(4)	B
60,00 – 74,99	Good(3)	C
50,00 – 59,99	Sufficient (2)	D
0,00 – 49,99	Insufficient (1)	F

Obligatory literature

1. Špoljar, A. (2007): Tloznanstvo i popravak tla (I dio), skripta, Visoko gospodarsko učilište u Križevcima, Križevci. https://www.vguk.hr/upload/E_skripte/Tloznanstvo_i_popravak_tla_I_dio.pdf
2. Racz, Z. (2003): Pedologija za studente stručnih studija, Poreč.
3. Racz, Z. (2004): Specifični uvjeti tvorbe i zaštite tala na mediteranskom području, Poreč.
4. Teaching materials, professional and scientific articles

Additional literature
1. Vukadinović, V. i Vukadinović, V. (2016): Tlo, gnojdba i prinos. Osijek, elektroničko izdanje. http://ishranabilia.com.hr/literatura/eKnjiga_Tlo-gnojdba-prinos.pdf

1. Vukadinović, V. i Vukadinović, V. (2016): Tlo, gnojdba i prinos. Osijek, elektroničko izdanje.
http://ishranabilia.com.hr/literatura/eKnjiga_Tlo-gnojdba-prinos.pdf

