Biotechnical Faculty / STUDIES OF APPLIED AGRICULTURE - CONTINENTAL FRUIT GROWING / MECHANIZATION IN PLANT PRODUCTION

Course:	MECHANIZATION IN PLANT PRODUCTION			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
2861	Mandatory	5	6	3+2+0
Programs	STUDIES OF APPLIED AGRICULTURE - CONTINENTAL FRUIT GROWING			
Prerequisites	None			
Aims	Introducing students to the study and application of mechanization tools			
Learning outcomes	- Apply theoretical knowledge of mechanization in production practice, and understand technical-technological solutions of drive machines and tools. - Selects and applies designed lines of machines in production practice, and evaluates and organizes mechanical work - Recommend individual machines depending on the type of production and plan the work program or technological project			
Lecturer / Teaching assistant	Prof. Dr. Velibor Spalević, MSc Darko Dubak			
Methodology	Lectures, exercises, seminar papers, colloquia and final exam			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Importance and role of mechanization. Driving machines			
I week exercises	Importance and role of mechanization. Driving machines			
II week lectures	Internal combustion engines (SUS) and two-stroke engines			
II week exercises	Internal combustion engines (SUS) and two-stroke engines			
III week lectures	Tractors, exploitation of MTA (machine-tractor aggregates)			
III week exercises	Tractors, exploitation of MTA (machine-tractor aggregates)			
IV week lectures	Machines and tools for systematization of land when raising plantations			
IV week exercises	Machines and tools for systematization of land when raising plantations			
V week lectures	Machines and tools for basic tillage / Colloquium I			
V week exercises	Machines and tools for basic tillage / Colloquium I			
VI week lectures	Machines and tools for additional tillage (specialized machines)			
VI week exercises	Machines and tools for additional tillage (specialized machines)			
VII week lectures	Remedial colloquium I			
VII week exercises	Remedial colloquium I			
VIII week lectures	Mechanization in organic agriculture / Machines for applying organic fertilizers			
VIII week exercises	Mechanization in organic agriculture / Machines for applying organic fertilizers			
IX week lectures	Planting machines			
IX week exercises	Planting machines			
X week lectures	Machines and devices for the application of chemical agents in protection			
X week exercises	Machines and devices for the application of chemical agents in protection			
XI week lectures	Pruning machines and devices / Colloquium II.			
XI week exercises	Pruning machines and devices / Colloquium II.			
XII week lectures	Machines for removing pruning products			
XII week exercises	Machines for removing pruning products			
XIII week lectures	Mechanized harvesting / Remedial colloquium II			
XIII week exercises	Mechanized harvesting / Remedial colloquium II			
XIV week lectures	Mechanized harvesting devices			
XIV week exercises	Mechanized harvesting devices			

XV week lectures	Transport to processing facilities and warehouses
XV week exercises	Transport to processing facilities and warehouses
Student workload	Weekly 5 credits x 40/30 = 6 hours and 40 minutes Structure: 3 hours of lectures 2 hours of exercises 1 hour and 40 minutes of independent work, including consultation During the semester: Lessons and final exam: (6 hours and 40 minutes) x 16 = 106 hours and 40 minutes Necessary preparations before the beginning of the semester (administration, registration of certificates) (2x 6 hours and 40 minutes) = 13 hours and 20 minutes Total load for the subject 5x30 = 150 Supplementary work for exam preparation in the make-up exam period, including taking the make-up exam from 0 to 30 hours Load structure: 106 hours and 40 minutes (teaching) + 13 hours and 20 minutes (preparation) + 30 hours (additional work)

Per week	**Per semester**
6 credits x 40/30=8 hours and 0 minuts 3 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises **3 hour(s) i 0 minuts** of independent work, including consultations	Classes and final exam: **8 hour(s) i 0 minuts x 16 =128 hour(s) i 0 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **8 hour(s) i 0 minuts x 2 =16 hour(s) i 0 minuts** Total workload for the subject: **6 x 30=180 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **36 hour(s) i 0 minuts** Workload structure: **128 hour(s) i 0 minuts (cources), 16 hour(s) i 0 minuts (preparation), 36 hour(s) i 0 minuts (additional work)**
Student obligations	Students are required to attend classes, practical exercises, do colloquiums and final exams.
Consultations	On the day when classes are organized, 1 hour a week after the class
Literature	1. Mitrović,D.(2011): Mehanizacija u poljoprivredi, Podgorica. 2. Urošević,M.,Živković,M. (2009): Mehanizacija voćarsko-vinogradarske proizvodnje, Poljopriv. fakultet, Beograd. 3. Drazic, M.; Gligorevic, K.; Pajic, M.; Zlatanovic, I.; Spalevic, V.; Sestras, P.; Skataric, G.; Dudic, B. (2020). The Influence of the Application Technique and Amount of Liquid Starter Fertilizer on Corn Yield. Agriculture 2020, 10, 347. 4. Oljaca, M., Radojevic, R., Pajic, M., Gligorevic, K., Drazic, M., Spalevic, V., Dimitrovski, Z. (2013): Tracks or wheels – perspectives and aspects in agriculture. The First International Symposium on Agricultural Engineering, 4th - 6th October 2013, Belgrade, Serbia, III, 9-19. 5. Oljaca, M., Raicevic, D., Ercegovic, DJ., Vukic, DJ., Oljaca, S. Radojevic, R., Zivkovic, M., Gligorevic, K., Pajic, M., Spalevic, V., Ruzicic, L. (2014): Aspects of using machinery and tools in contemporary plant production - Marsh soils case. Agriculture and Forestry, Vol. 60. Issue 1: 39-51.
Examination methods	Activity during lectures: 1 x 5 = 5 points Seminar paper: 1 x 5 = 5 points Colloquium: 2 x 20 = 40 points Final exam (oral if necessary) = 1 x 50 = 50 points. Grade Number of points: A (≥ 90 to 100 points); B (≥ 80 to < 90); C (≥ 70 to < 80); D (≥ 60 to < 70); E (≥ 50 to < 60) F < of 50
Special remarks	-
Comment	-

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points