SYLLABUS (MODULE-ERASMUS+)

Name in Polish HORT Podstawy projektowania i zastosowania systemów nawadniania i fertygacji w uprawie warzyw HoRT Head of course/module Dr ing. Włodzimierz Krzesiński Unit(-s) providing the course/module (Institute/Department) Department of Vegetable Crops Field of study Level Profile Hortculture Conganised classes/lectures and self-study) Sernes Type of studies: full-time Type of studies: extramural - lectures - lectures 10 - lectures - laboratory practical 15 - - project based practical 15 - - project based practical 15 - - self-study 80 - Self-study DBJECTIVE OF COURSE/MODULE Basic knowledge on designing and applying irrigation and fertigation systems for vegetable crops TEACHING METHODS Lecture supported by multimedia presentation, exercises, calculations, discussion, presentation of case stude by students LetarNING OUTCOMES Reference to field outcomes outcomes 9 E1 - Student has basic knowledge in the design of irrigation and fertigation Not	Course/module (as specified in the approved curriculum for the field of study) Basic designing and applying irrigation and fertigation systems for vegetable crops						Catalogue number			
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SolutionE5 - Student is able to correctly identifies and resolves dilemmas related to irrigation systems;E6 - The student is able to actions aimed at limiting the risk and anticipating the effects of irrigation and fertigation systems on the state of the environment;	E5 - Student is able to correctly identifies and resolves dilemmas related to irrigation systems; E6 - The student is able to actions aimed at limiting the risk and anticipating the effects of irrigation and fertigation systems on the state of the environment;									
Methods to verify learning outcomes Outcome Reference Numbers Numbers	Methods to verify learning outcomes					Outcome Reference Numbers				
						E1, E2, E3, E4, E5, E6 E1, E2, E3, E4, E5, E6				

TEACHING CONTENT							
Content of lectures: basic design of irrigation and fertigation system, rules of designing, equations for							
calculation, nuzzles, sprinklers, pipes, fittings, drippers, valves, automatization, mixers, drawings, AutoCAD,							
examples of irrigation system							
Content of exercises: Calculation: water flow, pressure drop, pipe diameter water amount, basic design of							
irrigation system, fertigation, technical drawing, AutoCAD, simple design of selected areas							
Project: Design of irrigation system							
Forms and criteria for passing of course/module Percentage of final ma							
Lectures and exercises - written tests- passed from 51%	80%						
Project - completion	20%						
LIST OF LITERATURE							
Basic literature							
Hunter 2016. Irrigation System Design. www.hunterindustries.com							
Hunter 2016. Decoder Systems. Design Guide. www.hunterindustries.com							
Rain Bird. 2016. Landscape Irrigation Design Manual. www.rainbird.com							