POLYTECHNIC OF MEĐIMURJE IN ČAKOVEC

COURSE SYLLABUS

ACADEMIC YEAR: 2020/2021

1. GENERAL COURSE INFORMATION				
1.1 Course name	**CONSTRUCTION MODELLING – OG,EI**			
1.2 Study program/s	**Undergraduate professional study Sustainable Development**			
1.3 Course status (O,E)	**Required**	**1.6 Mode of instruction (number of hours)**	**Lectures**	15
1.4 Course code	**4011**		**Exercises**	30
1.5 Course abbreviation	**KM-OG**		**Seminars**	
1.6 Semester	II semester		**E-learning**	
1.7 ECTS	**4**	**1.7 Place and time of instruction**	Premises of Polytechnic of Međimurje in Čakovec, according to the schedule published on the website	

2. TEACHING STAFF			
2.1 Course leader/s-title	**Jasmina Ovčar, mag.ing.arh.i urb.** senior lecturer	**contact**	jovcar@mev.hr
		contact	
2.2 Assistant/s- title		**contact**	
		contact	
2.3 Instruction held by- title		**contact**	

3. COURSE DESCRIPTION	
3.1 Course goals	The aim of the course is to train students to use new tools using computers in the construction process. Students must master the way they work in BIM construction programs, as this is imperative for competitiveness in the labour market. This course is an introduction to the BIM system through the AllPlan program, whereby students master basic drawing skills so that they can build on the acquired knowledge in all courses that follow in the study direction Sustainable construction, expanding them into the areas of architectural design, constructor design and dimensioning, technology and organization of construction, urban design, energy certification of buildings, building management, etc., including in all segments the issue of sustainability.
3.2 Prerequisites	The condition for joining this course is passed the Technical Drawing Exam (OG,EI). The requirement for taking the exam in Construction Modelling is a completed course and all the work tasks from the given course are fulfilled.
3.3 Course outcomes	Studenti će nakon uspješno savladanog kolegija moći: I1 – kreirati tehnički crtež u BIM sustavu (AllPlan) u skladu s pravilima tehničke struke, uključujući okvir, sastavnicu, tehničko pismo, formatiziranje / R 3 I2 – analizirati različita mjerila te predložiti i odabrati prihvatljivo mjerilo za crtanje, odabir vrsta crta, radeži u BIM sustavu/ R 4 I3 - analizirati kotiranje kako bi nacrtani element bio jednoznačno određen, te kreiranje načina kotiranja na zadanom crtežu / R 5 I4 – razumjeti i analitički obraditi podatke iz idejne skice ili rješenja na temelju koje se izrađuje tehnički crtež u BIM sustavu / R 5 I5 – modelirati objekt u skladu sa zadanim zadatkom/R 6

	I6 – analizirati uzročno-posljedične veze pri izradi crteža i modela te pronalaziti kraće i brže načine izrade na temelju vlastitih stečenih vještina i znanja /R6
3.4 Course content	The BIM system, which is now increasingly used, would have to become a standart soon, and with new generations of students decided to work in this system, with a continuous professional education of teaching staff.

3.5 Types of coursework

X	Lectures	X	Exercises		Blended e-learning	X	Individual activities		Laboratory
	Seminars and workshops		Distant learning		Field classes		Multimedia and network		Mentorship
	Other								

3.6 Language of instruction

Croatian/English

3.7 Monitoring students' work (enter the number of ECTS credits for each activity so that the total number of ECTS credits is equal to the total ECTS value of the course, 1 ECTS = 30 hours)

1,5	Class attendance		Seminars		Essay
0,5	Class activity	1	Project		Report/paper
	Midterm exams		Practical task		Continuous knowledge check
1	Written exam		Experimental work		
	Oral exam		Research		

3.8 Assessment and evaluation of students' work during classes and at the final exam

Activity specification	Percent %	Points
Assessment during instruction		
Attendance	20%	20
Class activity	20%	20
Work independently on assignments in class	15%	15
Independent work on tasks at home	15%	15
Exam assessment for the students who failed to fullfil all the obligatory requirements during the semester		
Written exam	*30%*	*30*
Total:	**100%**	**100**

3.9 Assessment criteria – analysis per learning outcomes

Ways of evaluating learning outcomes						
	Attendance	**Activity**	**Work in class**	**work on tasks at home**	***Written exam***	**Total**
Outcome 1			5	5	5	15
Outcome 2			5	5	5	15
Outcome 3			5	5	5	15
Outcome 4			10	10	5	25
Outcome 5			5	5		10
Outcome 6			5	5		10
Outcome not-related	5	5				10
Total	5	5	35	35	20	100

Grading of outcomes (in order to pass the mid-term exam/exam the student must achieve more then 60% points for each learning outcome)

Points Grade

91 – 100 excellent (5)

81 – 90 very good (4)

	71 – 80 good (3) 61 – 70 pass (2) 0 – 60 fail (1)	
3.10 Specific features related with taking the course	Regular attendance and teaching activities are important, as lectures and exercises aim to master the material. Therefore, it is necessary to work regularly and at home, through solving the given tasks, and resolving all doubts and misunderstandings immediately on the next hour. Every well-crafted task in class and at home is defined as a colloquiated material. The final written exam is taken at the time of regular and extraordinary exam periods. The written exam consists of creating a model according to the default template. The type of question is defined by the teacher, but all questions and tasks cover the material of the course that was handled in lectures and exercises.	
3.11 Students obligations	Full-time students are required to attend at least 70% of the total number of hours of lectures and exercises in order to exercise the right to take the exam. Part-time students are required to attend at least 30% of the total number of hours of lectures and exercises in order to exercise the right to take the exam. If the student has not fulfilled all the obligations provided for in the course, he/she is obliged to attend lectures again and meet the requirements for taking the exam. Incomingness can be compensated by online consultations, organized webinars and added tasks set by teachers. One class lasts 45 minutes, and more hours make up the unit. Absence from one unit counts as one absence. Delays and notes are recorded separately. In this case, the student has been absent with more than 50% of the lessons, and has a legitimate reason/apology, the application should be submitted to the Department Council, which then decides on the justification of student absences with the obligatory opinion of the holder of the course.	
3.12 Written assignments	Preparation of all written tasks (with exercises and domestic papers) is a condition for obtaining signatures from this course, and a prerequisite for taking the exam. The result of advancement in the course is reflected in the model made at the beginning of class. Depending on the degree of progress and accuracy of the processed model, the initial assessment for the written exam is encouraged. The workload includes a continuous oral knowledge check carried out as part of each exercise, in such a way that students have to clarify how they solved written domestic tasks (modelling in the BIM system), by what knowledge and methods they used. If the student has fulfilled all the obligations related to the preparation of written tasks from exercises and domestic tasks (Map of Solved Tasks) on time and accurately, at the last, 15th hour of the exercise he can access the pre-season. The type of question is defined by the teacher, but all questions and tasks cover the material of the course that was handled in lectures and exercises.	
3.13 Required reading	1.	2017 i AutoCad LT 2017m G.Omura,B.Benton., 2017.
	2.	vezana uz edukacijski program BIM sustava – po izboru nastavnika, u skladu s edukacijskim programom na koji MEV ima pravo korištenja
3.14 Additional reading	1.	BIM AllPlan on-line edukacija (5 x 2 sata edukacijskog on-line materijala)
4 ADDITIONAL COURSE INFORMATION		
4.1 Quality control	The quality of the program, teaching process, teaching skills and level of mastery of the material will be established by conducting a written evaluation based on questionnaires, and in other standardised ways and in accordance with the by-laws of the Polytechnic of Međimurje in Čakovec.	

4.2 Contact the teacher	Students can contact the teacher during the office hours and during classes, while for short questions and explanations they can contact him/her any day during working hours by coming in person or by landline. It is also possible to ask questions by e-mail, which will be answered in 48 hours at the latest. It is desirable for students to come as often as possible for any possible questions during the teacher's office hours.
4.3 Information about the course	It is the obligation of each student to be regularly informed about the course. All notifications about the classes or possible postponement of classes will be posted on the bulletin board and on the website of the Polytechnic at least 24 hours in advance.
4.4 Course contribution to the study program	I1 - Interpret information, ideas, problems and solutions to professional and general audiences I2 - Use new technologies and techniques as part of the lifelong learning process I3 - Use foreign languages in professional communication and use of professional literature I4 - Represent an ethical approach in work and according to project team associates I5 - Critically judge arguments, assumptions and data in order to create opinions and adhesion troubleshooting I17 - Create an architectural and urban solution using basic principles of designing low-energy buildings using modern computer systems