



# POLYTECHNIC OF MEĐIMURJE IN ČAKOVEC

## COURSE SYLLABUS

ACADEMIC YEAR: 2020/2021

### 1. GENERAL COURSE INFORMATION

1.1 Course name	TECHNICAL DRAWING – 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	4003		Exercises	45
1.5 Course abbreviation	TC-OG		Seminars	
1.6 Semester	I.		E-learning	
1.7 ECTS	5	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 goals of the course are to acquire knowledge in the field of technical drawing and the basics of draft geometry, in order to prepare for the possibility of further study and mastering the teaching content in the direction sustainable construction.
3.2 Prerequisites	Since the course is kept at the 1st semester, there are no previous conditions for listening to the course, while the conditions for joining the course are met all the conditions of attendance and activities, and all work obligations and tasks set out in the course of listening to the course are met.
3.3 Course outcomes	After successfully mastering the course, students will be able to: <ul style="list-style-type: none"> <li>I1 – create a technical drawing in accordance with the rules of the technical profession, including framework, component, technical letter, formatting / R 3</li> <li>I2 – create a drawing by observation using measurement and evaluation techniques and paper application, critical evaluation of one's own work and the work of colleagues, with spotting and analyzing errors and the causes of their formation /R 4</li> <li>I3 – analyze the listing in order to make the drawn element unambiguously determined (minimum and optimal), and create ways of listing on your drawing and drawing according to the given scale and listing in relation to the scale / R 5</li> <li>I4 – understand and analytically process the data necessary for the presentation of objects in orthogogonal projection / R 5</li> </ul>

	<p>15 – construct orthogonal projections of points, length, direction, plane, cross-section of routes and straight lines, draw actual lengths of length in orthogonal projection, side directions and angles, directions of tomorrow / R 6</p> <p>16 – construct orthogonal designs of geometric figures (triangle and square) and bodies (cube, cone, pyramid) / R</p>																																																																															
<b>3.4 Course content</b>	<p>Technical drawing includes only basic instructions and knowledge necessary for switching to computer drawing and formatting. In the field of draft geometry, the aim is to familiarize students with orthogoline projection and through interactive lectures and especially work on exercises and homework tasks with the aim of developing spatial perception and mastering the rules, techniques and skills of technical drawing.</p>																																																																															
<b>3.5 Types of coursework</b>	X	Lectures	X	Exercises		Blended e-learning	X	Individual activities		Laboratory																																																																						
		Seminars and workshops		Distant learning		Field classes		Multimedia and network		Mentorship																																																																						
		Other																																																																														
<b>3.6 Language of instruction</b>	Croatian/English																																																																															
<b>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)</b>	2	Class attendance				Seminars			Essay																																																																							
	1,5	Class activity				Project			Report/paper																																																																							
		Midterm exams				Practical task		0,5	Continuous knowledge check																																																																							
	1	Written exam				Experimental work																																																																										
		Oral exam				Research																																																																										
<b>3.8 Assessment and evaluation of students' work during classes and at the final exam</b>	<table border="1"> <thead> <tr> <th>Activity specification</th> <th>Percent %</th> <th>Points</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">Assessment during instruction</td> </tr> <tr> <td>Attendance</td> <td>20%</td> <td>20</td> </tr> <tr> <td>Class activity</td> <td>20%</td> <td>20</td> </tr> <tr> <td>Work independently on assignments in class</td> <td>15%</td> <td>15</td> </tr> <tr> <td>Independent work on tasks at home</td> <td>15%</td> <td>15</td> </tr> <tr> <td colspan="3" style="text-align: center;"><i>Exam assessment for the students who failed to fulfil all the obligatory requirements during the semester</i></td> </tr> <tr> <td>Written exam</td> <td>30%</td> <td>30</td> </tr> <tr> <td><b>Total:</b></td> <td><b>100%</b></td> <td><b>100</b></td> </tr> </tbody> </table>										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	<i>Exam assessment for the students who failed to fulfil all the obligatory requirements during the semester</i>			Written exam	30%	30	<b>Total:</b>	<b>100%</b>	<b>100</b>																																											
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	<p>Grading of outcomes (in order to pass the mid-term exam/exam the student must achieve more than 60% points for each learning outcome)</p> <p>Points      Grade</p> <p>91 – 100    excellent (5)</p> <p>81 – 90     very good (4)</p> <p>71 – 80     good (3)</p> <p>61 – 70     pass (2)</p> <p>0 – 60      fail (1)</p>						
<b>3.10 Specific features related with taking the course</b>	<p>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 modelling according to the template. 5 assignments. Each task carries 3 points. The total maximum number of points on a written exam is 15 points. The oral exam is not held, but refers exclusively to the interpretation and justification of the method of drafting the written part. 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.</p>						
<b>3.11 Students obligations</b>	<p>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 set by the course, he is obliged to attend the lectures again and meet the conditions for taking the exam.</p> <p>Attendance can be offset by online tuition, organised webinars and added assignments given by teachers. One lesson lasts 45 minutes, and several hours form a teaching unit. Absence from one teaching unit is counted as one absence. Delays and apologies are recorded separately. In that case, if the student missed more than 50% of classes, and has a justifiable reason/apology, the request should be submitted to the Department Council, which then decides on the justification of student absences with the obligatory opinion of the course leader.</p>						
<b>3.12 Written assignments</b>	<p>Izrada svih pismenih zadataka (s vježbi i domaćih radova) uvjet je za dobivanje potpisa iz ovog kolegija, te preduvjet za pristupanje ispitu.</p> <p>U radno opterećenje ubraja se i kontinuirana usmena provjera znanja koja se provodi u sklopu svakih vježbi, na način da studenti moraju pojasniti kako su riješili pismene domaće zadatke, kojim znanjem i metodama su se koristili. Ukoliko je student na vrijeme i točno ispunio sve obaveze vezane za izradu pismenih zadataka iz vježbi i domaćih zadataka (Mapa riješenih zadataka), na posljednjem, 15. satu vježbi može pristupiti predroku.</p> <p>Vrstu pitanja definira nastavnik, no sva pitanja i zadaci pokrivaju gradivo kolegija koje je bilo obrađivano na predavanjima i vježbama.</p>						
<b>3.13 Required reading</b>	<table border="1"> <tr> <td>1.</td> <td>Tehničko crtanje: Sveučilišni udžbenik, Milan Opalić, Čakovec, 2003.</td> </tr> <tr> <td>2.</td> <td>Deskriptivna geometrija 1, Vilko Niče, Zagreb, Školska knjiga, 1987.</td> </tr> <tr> <td>3.</td> <td>Deskriptivna geometrija 2., Vilko Niče, Zagreb, Školska knjiga, 1987.</td> </tr> </table>	1.	Tehničko crtanje: Sveučilišni udžbenik, Milan Opalić, Čakovec, 2003.	2.	Deskriptivna geometrija 1, Vilko Niče, Zagreb, Školska knjiga, 1987.	3.	Deskriptivna geometrija 2., Vilko Niče, Zagreb, Školska knjiga, 1987.
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<b>4 ADDITIONAL COURSE INFORMATION</b>							
<b>4.1 Quality control</b>	<p>The quality of the program, teaching process, teaching skills and level of mastery of the material will be established by conducting a written evaluation</p>						

	based on questionnaires, and in other standardised ways and in accordance with the by-laws of the Polytechnic of Međimurje in Čakovec.
<b>4.2 Contact the teacher</b>	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.
<b>4.3 Information about the course</b>	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.
<b>4.4 Course contribution to the study program</b>	Interpret information, ideas, problems and solutions to professional and general audiences Use foreign languages in professional communication and use of professional literature Critically judge arguments, assumptions and data in order to create opinions and adhesion troubleshooting Create an architectural and urban solution using basic principles of designing low-energy buildings using modern computer systems