	POLYTECHNIC OF MEĐIMURJE IN ČAKOVEC

COURSE SYLLABUS	
ACADEMIC YEAR:	2022/2023

1. GENERAL COURSE INFORMATION

1.1 Course name	**Probability and Statistics**			
1.2 Study program/s	Undergraduate professional study of Computer Science			
1.3 Course status (O,E)	O - obligatory	**1.6 Mode of instruction (number of hours)**	**Lectures**	30
1.4 Course code			**Exercises**	30
1.5 Course abbreviation	ViS		**Seminars**	
1.6 Semester	III.		**E-learning**	
1.7 ECTS	6	**1.7 Place and time of instruction**	Lecture halls of the Polytechnic of Međimurje in Čakovec, according to the class schedule published on the website	

2. TEACHING STAFF

2.1 Course leader/s-title	mr.sc. Drago Francišković, Senior Lecturer	**contact**	drago.franciskovic@mev.hr
		contact	
2.2 Assistant/s- title		**contact**	
		contact	
2.3 Instruction held by-title	mr.sc. Drago Francišković, Senior Lecturer	**contact**	drago.franciskovic@mev.hr

3. COURSE DESCRIPTION

3.1 Course goals	Introduce students to the basic concepts of descriptive statistics, probabilities and statistical methods and tests. To enable students to use basic methods of descriptive statistics, regression analysis and to demonstrate the application of statistical tests. Encourage students to think, and train them to use the acquired knowledge in other subjects with the use of computers. Raise the general level of mathematical literacy and encourage students to orderliness, accuracy and systematics in problem solving and in written and oral expression.
3.2 Prerequisites	Passed exam Mathematics I, passed Mathematics II.
3.3 Course outcomes	1. Apply methods of descriptive statistics (understand and create a table of frequencies; graphically display data; determine environmental measures and scatter measures). R5 2. Apply regression and correlation analysis and draw a conclusion (linear regression). R6 3. Explain the concept of events and the definition of probability, and apply the acquired knowledge and skills in determining the probability of events in various situations. R6 4. Explain the concept of a random variable and functions related to them, and apply various distribution functions and probability functions of a random variable. R6 5. Apply some statistical tests. R5
3.4 Course content	

3.5 Types of coursework	x	Lectures	x	Exercises	x	Blended e-learning	x	Individual activities	X	Laboratory
		Seminars and workshops	x	Distant learning		Field classes		Multimedia and network		Mentorship
		Other	Self-learning from given materials							

3.6 Language of instruction	

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)

2	Class attendance		Seminars		Essay
	Class activity		Project		Report/paper
2	Midterm exams		Practical task	2	Continuous knowledge check
	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
Evaluation during classes		
Class attendance	4,00%	6
Activity during classes	12,00%	18
Test 1	12,00%	18
Test 2	12,00%	18
Test 3	12,00%	18
Colloquium 1	16,00%	24
Colloquium 2	16,00%	24
Colloquium 3	16,00%	24
Evaluation of exam work for students who did not pass the colloquiums and tests		
Written exam	86,00%	126
Total:	**100,00%**	**150**

3.9 Assessment criteria –analysis per learning outcomes

	Ways of evaluating learning outcomes					
	Continuous knowledge check (tests 1, 2 and 3)	Seminar	Colloquium 1	Colloquium 2	Colloquium 3	Total
Outcome 1	12		14			26
Outcome 2	6		10			16
Outcome 3	18			24		42
Outcome 4	9				12	21
Outcome 5	9				12	21
Outside the outcome						24
Total	54		20	24	28	150

Grading of outcomes (in order to pass the mid-term exam/final exam the student must achieve at least 50% points for each learning outcome)

Points   Grade

127,50 – 150,00   excellent (5)

112,50 – 127,49   very good (4)

 93,75 – 112,49   good (3)

	75,00 − 93,74 pass (2)	
	0,00 − 74,49 fail (1)	
3.10 Specific features related with taking the course	During the course, students will write 3 midterm exams. As a rule, midterms are written after every 4 to 5 weeks of classes and cover the learning outcomes covered during that period. As a rule, separate intermediate exams are written separately from theory (tests) and from practical tasks (colloquium).	
	The type of questions and tasks in the midterm exams is defined by the teacher, but all questions and tasks cover the course material or learning outcomes.	
	Regardless of the number of points achieved in an intermediate exam or according to a learning outcome, the student can access all subsequent intermediate exams and other knowledge tests. Only points that are at least 50% of the maximum amount of points per learning outcome are recognized for the final grade.	
	Once student won points in intermediate exams (colloquiums) for each learning outcome are no longer deleted unless the student decides to improve the result for each learning outcome, whereby the points won until then are deleted and newly earned points for that learning outcome are entered if they are more favorable for the students.	
	Student who have not passed all intermediate exams, have the opportunity to correct the exam deadlines on which, as a rule, they take the material in its entirety.	
	Points earned by assignments, attendance and other activities are retained by the student throughout the academic year and can only be corrected exceptionally, with the express approval of the subject teacher.	
3.11 Students obligations	Students have the obligation to attend classes regularly, be active in class and work on learning, practicing and determining the teaching material at home in the fund of hours provided by the ECTS credit system.	
	In order to register for the exam, full-time students must achieve a minimum of 30 points in all midterm exams, and attend at least 70% of the total number of lecture hours and at least 70% of the total number of practice hours in order to register for the exam. Part-time students must attend at least 50% of the total number of hours of lectures provided for them and at least 50% of the total number of hours of exercises provided for them in order to be able to register for the exam. Otherwise they cannot take the exams and have to re-enroll the subject. Students who for some reason do not have to attend classes are required to periodically contact teachers during classes, by email or by coming to consultations, related to classes and teaching materials.	
	Students who frequently disrupt classes will be removed from class, and their attendance will not be recorded.	
3.12 Written assignments		
3.13 Required reading	1.	I. Urbiha: Vjerojatnost i statistika, 2007. (free teaching materials available to students)
	2.	D. Francišković: Kombinatorika u računanju vjerojatnosti, 2021.
	3.	Students' own notes from lectures and exercises.
3.14 Additional reading	1.	Ž. Pauše: Uvod u matematičku statistiku, Školska knjiga, Zagreb, 1993.
	2.	Statistička teorija i primjena, Tehnička knjiga, Zagreb, 1988.

	3.	M. Ilijašević, Ž. Pauše: Riješeni primjeri i zadaci iz vjerojatnosti i statistike, Zagreb, 1990.

4 ADDITIONAL COURSE INFORMATION

4.1 Quality control	In accordance with the acts of the Polytechnic of Međimurje in Čakovec.
4.2 Contact the teacher	Students can contact the teacher during the consultation period (two hours per week) and during classes, while for short questions and explanations they can contact 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 as soon as possible (except during weekends or holidays). It is recommended that students come for consultations as often as possible during the learning period, ie during the teaching period.
4.3 Information about the course	It is the obligation of each student to be regularly informed about the course. All notifications about the holding 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	Application of mathematical and statistical knowledge and skills to practical problems in practice.