

COURSE NAME		Elementary geometry			
Code	PMM019	Year of study	1st year of undergraduate study		
Course teacher	Jurica Perić	Credits (ECTS)	6		
Associate teachers		Type of instruction (number of hours)	L	S	E
			30		30
Status of the course	COMPULSORY COURSE	Percentage of application of e-learning	30%		
COURSE DESCRIPTION					
Course objectives	The aim of the course is to systematise, consolidate and deepen the knowledge of elementary (Euclidean) geometry setting the foundation strictly axiomatic. Within this axiomatisation classic model of Euclidean geometry will be processed and introduction for other models and geometry will be made.				
Course enrolment requirements and entry competences required for the course					
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<p>The student is able to:</p> <ul style="list-style-type: none"> <li>- list the axioms of planimetry and stereometry</li> <li>- describe the history of the study of Euclid's fifth postulate</li> <li>- list isometries of the plane, express and reproduce their basic properties</li> <li>- describe triangle, circle and square and reproduce basic theorems, define a polygon and polygon area, show the areas of the basic polygons</li> <li>- define the volume of polyhedrons and show volumes of the basic polyhedrons</li> <li>- express and prove the claims of stereometry using previously proven claims from planimetry</li> <li>- solve the task corresponding to the theoretical concepts worked during the course</li> <li>- explain the significance of Euclidean geometry in mathematics, its historical and intuitive importance, and the reasons for the occurrence of other geometries, primarily hyperbolic geometry</li> </ul>				
Course content broken down in detail by weekly class schedule (syllabus)	<p>Planimetry:</p> <ul style="list-style-type: none"> <li>- five groups of axioms – 2 hours</li> <li>- some properties of isometry, symmetries – 4 hours</li> <li>- angles and some theorems about them – 2 hours</li> <li>- 5. Euclidean postulate – 2 hours</li> <li>- congruence of triangles, similarity of triangles – 4 hours</li> <li>- circles, tendon and tangential rectangle – 4 hours</li> </ul> <p>Polygons, polygon area - 6 hours</p> <p>Stereometry - the geometry of space</p> <ul style="list-style-type: none"> <li>- prisms, pyramids, cylinders, cones – 3 hours</li> <li>- polyhedrons and volume – 3 hours</li> </ul>				

Format of instruction	Lectures, exercises.
Student responsibilities	Attendance at 70% of lectures and 70% of exercises.
Screening student work ( <i>name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course</i> )	Attendance – 1 ECTS Colloquium – 1 ECTS Written exam – 1 ECTS Oral exam – 3 ECTS
Grading and evaluating student work in class and at the final exam	The exam is taken in written and oral form. Written exam is preliminary part of the exam and requirement for the oral exam is to pass a written exam. The written form of the exam can be taken partially, during class, where curriculum provided. Activity in class, solving homework, colloquium, written and oral examination are the elements from which form the final grade is formed.
Required literature (available in the library and via other media)	B. Pavković, D. Veljan, Elementarna matematika 1, Tehnička knjiga, Zagreb, 1991. B. Pavković, D. Veljan, Elementarna matematika 2, Školska knjiga, Zagreb, 1995.
Optional literature (at the time of submission of study programme proposal)	D. Palman, Planimetrija, Element, Zagreb, 1998. D. Palman, Stereometrija, Element, Zagreb, 2005.
Quality assurance methods that ensure the acquisition of exit competences	Statistics of test results and student evaluation via anonymous questionnaires at the end of the course. The survey is conducted according to the rules of the University of Split.
Other (as the proposer wishes to add)	