Course Unit Descriptor

Study Programme: Mechanization and Construction Engineering			
Course Unit Title: Power and Motion Transmission			
Course Unit Code: M2409			
Name of Lecturer(s): Čavić Maja			
Type and Level of Studies: Bachelor level			
Course Status (compulsory/elective): compulsory			
Semester (winter/summer): winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 4			
Prerequisites: None			
Course Aims: Introduce students to specific mechanisms and improve skills in kinematic and dynamic mechanism analysis.			
Learning Outcomes: Ability for application of specific mechanisms in practical problems as well as performing kinematic and dynamic analysis of mechanisms and machines in real conditions.			
Syllabus: Basics of centrode theory. Centrode transmissions. Transmissions with variable velocity ratio. Harmonic drive transmission. Analysis of planetary-differential gears (geometry, kinematics and dynamics). The dynamics of cam mechanisms. Design of cam mechanisms for a given kinematic task. Freewheel mechanism. Mechanisms with intermittent motion. Analysis of Geneva mechanisms(geometry, kinematics and dynamics). Lever mechanisms of complex structures. Design of linkages for a given kinematic task. Reduced mass and moment of inertia. Reduced force and torque. Equations of mechanism motion . Velocity regulation. Flywheel design.			
Required Reading: Relevant literature in English, tbd			
Weekly Contact Hours: 4	**Lectures: 2**	**Practical work: 2**	
Teaching Methods: Teaching forms: lectures, graphic and computer practical classes, consultations.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	**Final exam**	points
Group assignment		Examination Assignment	
Exercises			
Test			
Test			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			