

Study program: Industrial Engineering – Mechanical Engineering			
Course title: Mechanical Elements			
Professor/assistant: Vrekić M. Snežana			
Type of course: Compulsory			
ECTS credits: 6			
Prerequisites: None			
Aims of the course: Acquisition of professional knowledge for performing calculations, construction and modeling of machine parts and selection of standard machine elements; the ways of achieving their functional dependence.			
Learning outcomes: The student performs a calculation, measures and constructs machine parts and organizes their production and maintenance.			
Syllabus: <i>Theoretical Classes</i> <ul style="list-style-type: none"> – Friction transmitters; – Jagged transmitters (straight, angled, conical and worm transmitter) – kinematics and calculations; – Belt transmitters – operating principles and calculations; – Chain transmitters – forces, voltages, calculations; – Shafts – the purpose, calculations; Axles; Connections of shafts and supporting elements; – Circlips – shapes, application and selection of dimensions; – Threaded couples – calculations, marking and securing; – Springs – the purpose and division; – Bearings – sliding and rolling; – Couplings – the purpose, its function and types. <i>Practical Classes</i> Practical exercises, preparation of term paper/graphic work.			
Literature: <ol style="list-style-type: none"> 1. Nikolić V.: Mašinski elementi, teorija, proračun, primeri, Mašinski fakultet u Kragujevcu, 2004. 2. Nikolić V.: Mašinski elementi, teorija i primeri, Mašinski fakultet u Kragujevcu, 1995. 			
Number of active classes: 60		Lectures: 30	Practical classes: 30
Teaching methods: Lectures, video presentations, simulation of work of mechanical elements and systems, display of the structure, display of calculations, solving tasks, graphic design, consultations.			
Grading system (maximum 100 points) grading scale from 5 to 10: below 51 points – student fails the exam, grade 6 from 51- 60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91- 100 points.			
Pre-exam obligations:	Points:	Final exam:	Points:
Activity during theoretical lectures	max 5	Written exam	50
Practical training	max 5		
Written test(s)	max 20		
Term papers	max 20		
Minimum requirement for the final exam	30		