

Faculty of Mechanical Engineering / ROAD TRAFFIC / ENGINEERING ECONOMY

Course:	ENGINEERING ECONOMY			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
4127	Optional	1	4	2+1+0
Programs	ROAD TRAFFIC			
Prerequisites	No conditions.			
Aims	Through this course, students acquire the theoretical and practical basis of the elements of engineering economics.			
Learning outcomes	After passing this exam will be able to: 1. Explain the principles of engineering economics. 2. Identify the costs of the activities of road transport. 3. Explain the economic size. 4. Calculate the impact of time on the value of money. 5. Compare the current and future equivalent values and annuities. 6. Explain and calculating depreciation. 7. Do the economic-financial analysis of investments in road traffic			
Lecturer / Teaching assistant	Prof. dr Mileta Janjić			
Methodology	Lectures, exercises.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction, background and principles. Economy and design.			
I week exercises	Examples of application.			
II week lectures	Cost: terminology, types, assessment.			
II week exercises	Application of traffic.			
III week lectures	General economic environment. Costs managed design optimization.			
III week exercises	Current economic analysis of traffic problems.			
IV week lectures	Estimating cash flows for projects in traffic.			
IV week exercises	Examples of application.			
V week lectures	Refund of capital. Simple and complex interest. The concept of equivalence.			
V week exercises	Examples of application.			
VI week lectures	Cash flow.			
VI week exercises	Examples of application.			
VII week lectures	Disposable cash flows.			
VII week exercises	Examples of application.			
VIII week lectures	I Colloquium			
VIII week exercises	I Colloquium			
IX week lectures	Annuity and equivalent value.			
IX week exercises	Examples of application.			
X week lectures	Deferred annuity. Multiple interest. Variable interest rates.			
X week exercises	Application to traffic problems.			
XI week lectures	Nominal and effective interest rate. The interests of the various cases of accumulation.			
XI week exercises	Examples of application.			
XII week lectures	The terminology and concept of depreciation. The classic method of amortization. The modified system of depreciation. Exhaustion.			
XII week exercises	Application of the equipment in traffic.			
XIII week lectures	The elements of a business plan traffic company.			
XIII week exercises	Application of traffic.			
XIV week lectures	Economic and financial analysis of investments in traffic.			

XIV week exercises		Application of traffic.				
XV week lectures		II Colloquium				
XV week exercises		II Colloquium				
Student workload						
Per week			Per semester			
4 credits x 40/30=5 hours and 20 minuts 2 sat(a) theoretical classes 0 sat(a) practical classes 1 excercises 2 hour(s) i 20 minuts of independent work, including consultations			Classes and final exam: 5 hour(s) i 20 minuts x 16 =85 hour(s) i 20 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 5 hour(s) i 20 minuts x 2 =10 hour(s) i 40 minuts Total workload for the subject: 4 x 30=120 hour(s) Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 24 hour(s) i 0 minuts Workload structure: 85 hour(s) i 20 minuts (cources), 10 hour(s) i 40 minuts (preparation), 24 hour(s) i 0 minuts (additional work)			
Student obligations			Students are required to attend lectures and exercises, do colloquiums and final exams.			
Consultations			On the day of classes, after classes.			
Literature			<ul style="list-style-type: none"> • Vukčević M. M., Inženjerska ekonomija, Mašinski fakultet, Podgorica, 2012; • Dutina J., Inženjerska ekonomija, Trebinje, 1998; • Dubonjić R., Milanović D., Inženjerska ekonomija, Beograd, 1997.; • Sullivan W., Bontadelli J., Wicks E., Engineering Economy, Prent. 			
Examination methods			<ul style="list-style-type: none"> • Class attendance - 5 points; • Two colloquiums with 22.5 points each - 45 points; • Final exam - 50 points. • A passing grade is obtained if at least 50 points are accumulated cumulatively. 			
Special remarks						
Comment			Additional information concerning the course can be given by teacher.			
Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points