

COURSE GUIDE – short form

Academic year 2014 - 2015

Course name ¹	Automotive Design and Construction - 1					Course code	310.DI.DS		
Course type ²	DS	Category ³	DI	Year of study	3	Semester	6	Number of credit points	7

Faculty	of Mechanical Engineering			Number of teaching and learning hours ⁴					
Field	Automotive Engineering			Total	L	T	LB	P	IS
Specialization	Automotive Vehicles			175	56	-	28	28	63

Pre-requisites from the curriculum ⁵	Compulsory	207.DI.DID. Machine Design 1, 301.DI.DID. Machine Design 2
	Recommended	202.DI.DID. Materials Strength 1, 206.DI.DID. Materials Strength 2

General objective ⁶	Course objectives are structured in a manner consistent with a complete engineering training in the field of automotive vehicles, in accord to the overall structure and objectives of the curriculum.
Specific objectives ⁷	Classifications, Design elements - Clutches: requirements, classification, calculation constructive solutions. - Transmission: classifications, ratios, drives, specific elements of computing, constructive solutions. - Reducer - Longitudinal Transmission requirements, classification, constructive solutions, calculation and dimensioning elements. - Rear axle: requirements, classification. Main transmission: constructive solutions and computing elements. Differential: kinematics, dynamics, constructive solutions, computing elements. Planetary shafts: application regimes. Wheel hub. Mechanism guiding the wheels.
Course description ⁸	Automotive Design and Construction - 1 is a specialized discipline that provides the knowledge in construction, operation and specific methods of calculation of auto transmission parts and rear axle. The assimilation of theoretical and practical concepts presented in the course have purpose the ensuring to the future engineers the cognitive competences in the processes and phenomena inside automotive transmission.

Assessment			Schedule ⁹	Percentage of the final grade (minimum grade) ¹⁰
Continuous assessment	Class tests along the semester		weeks 7-8	10 %
	Activity during tutorials/laboratory works/projects/practical work		weeks 1-14	30 %
	Assignments		weeks 1-14	20 %
Final assessment	Final assessment form ¹¹		exam period	40 %
	Examination procedures and conditions: 1. Thematic Development; written test; percent of the f. grade 20 % 2. Case study; oral examination ; percent of the final grade 20%			

Course organizer	Associate Professor, PhD. Eng. Gheorghe MANOLACHE		
Teaching assistants			

¹ Course name from the curriculum

² DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)

³ DI – imposed, DO – optional, DL – facultative (from the curriculum)

⁴ Points 3.8, 3.5, 3.6a,b,c, 3.7 from the Course guide – extended form (L-lecture, T-tutorial, LB-laboratory works, P-project, IS-individual study)

⁵ According to 4.1 – Pre-requisites - from the Course guide – extended form

⁶ According to 7.1 from the Course guide – extended form

⁷ According to 7.2 from the Course guide – extended form

⁸ Short description of the course, according to point 8 from the Course guide – extended form

⁹ For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period

¹⁰ A minimum grade might be imposed for some assessment stages

¹¹ Exam or colloquium