

Study program: Road Traffic			
Subject name: Motor Vehicle Diagnostics			
Teacher: dr Nebojša J. Dimitrijević			
Subject status: Optional			
Number of ECTS: 6			
Conditions: None			
Subject objective Determination of diagnostics of motor vehicles and engines as well as parameters in the selection and evaluation of the determination of its characteristics.			
Subject outcome Introducing students who deal with transport problems with the segments of maintenance theory that are important for understanding the technology of diagnostics and basic knowledge of the technology of diagnostics of vehicles.			
Subject content			
<i>Theory classes</i>			
Diagnosis of the condition of motor vehicles and engines. Elements of diagnostics of motor vehicles and engines. Stages in the process of diagnosing the condition of motor vehicles and engines. Diagnostic parameters of motor vehicles and engines. Selection and evaluation of diagnostic parameters of motor vehicles and engines. Determining the norms of diagnostic parameters and engines. Diagnostic methods used. Diagnostic conditions of vital parts. Organization of diagnostics of motor vehicles and engines. Automation of motor vehicle and engine diagnostics. Errors that occur in determining the technical condition of motor vehicles and engines.			
<i>Practice classes</i>			
Vehicle parts and their role in the vehicle. Concepts and processes that occur in a motor vehicle during operation. Tools and devices used to determine faults and their elimination. Concepts of vehicle condition diagnostics and stages in the process of vehicle diagnostics. Diagnostic parameters of vehicles, selection and evaluation of the same and determination of the characteristics of their changes. Diagnostic methods that can be applied in determining the technical condition of motor vehicles and engines. Self - diagnostic systems for determining the technical condition of motor vehicles. Tools and procedures for determining faults and their elimination during vehicle repair. By determining the technical condition of vital parts of motor vehicles (drive unit, transmission, running system, braking system, electrical installation). On-board diagnostics. Errors that may occur when determining the technical condition of motor vehicles. Technological conditions for the implementation of interventions on means of transport (work surfaces, universal and special equipment, workers). Basic functions of the maintenance plant (reception-dispatch, fuel supply, technical interventions accommodation). Technical interventions. Technical inspection (interventions, equipment, goal). Maintenance of maintenance plant (information system, spare parts warehouse, energy supply).			
Literature:			
1. Б. Крстић, „Техничка експлоатација моторних возила и мотора“, Машински факултет, Крагујевац, 2009.			
2. Ч. Дубока, „Технологије одржавања возила 1“, Машински факултет, Београд, 1992.			
3. Ј. Тодоровић, „Одржавање моторних возила – Основи теорије одржавања“, Машински факултет, Београд, 1984.			
4. В. Папић, Р. Мијаиловић, В. Момчиловић, „Транспортна средства и одржавање“, Саобраћајни факултет, Београд, 2007.			
5. F. Schaffer, „Dijagnoza vozila uz pomoć OBD 2“, Agencija ЕНО, Београд, 2012.			
6. Н. Остојић, „Ауто дијагностика ОБД–2“, Микро Електроника, Београд, 2007.			
Number of active classes		Theory classes: 45	Practice classes: 30
Teaching methods Oral presentation method, interview method, seminar paper method and demonstration method.			
Knowledge assessment (maximum number of points 100)			
Pre-exam obligations	points	Final exam	points
activity during the lectures	5	written exam	–
practice classes	5	oral exam	30
colloquium/s	50		
seminar/s	10		