Study program: Road Traffic Engineering

Course title: Freight Transport

Professor/assistant: Milka Ivković

Type of course: Compulsory

ECTS credits: 6
Prerequisites: none

# Aims of the course:

Students acquire scientific and professional knowledge needed for the organization of road freight transport and transport of dangerous goods according to the official rules and regulations; Students are familiar with different types of cargo, its physical, chemical and other traits, possible changes during a transport process and negative impact on the operators, other participants in traffic and the environment.

# **Learning outcomes:**

Students will be able to organize road freight transport and transport of dangerous goods from a place of loading to a place of unloading in both domestic and international traffic. Consequently, students will be able to optimize the transport process regarding the choice of the cargo and means of transport, to control realization of the transport process, to understand domestic and international legal regulations and standards related to road freight transport.

### Syllabus:

Theoretical part: The use and characteristics of certain types of packaging in transport. The use of pallets and containers in transport. Methods of protecting freight in road traffic. Incoterms rules. The importance of the CMR Convention in the international road freight transport. Transport of perishable goods, livestock, exhibits, trade samples and professional equipment in road traffic. Legal regulation of transport of dangerous goods in domestic and international traffic. Classification of dangerous goods. Hazard symbols. Orange signs. Exemptions from ADR regarding quantities that can be transported by a transport unit. Safety obligations for participants in the transport of dangerous goods. The use of packaging, intermediate bulk containers (IBC) and other containers. The process of marking and labeling pieces for shipping. Placing large signs (posters), and labeling containers, MEGC, MEMU, container-tank, portable tanks and vehicles. Documents for transport of dangerous goods. Requirements to be fulfilled by a crew of a vehicle transporting dangerous goods. Restrictions for vehicles transporting dangerous goods in transit in tunnels and on road network.

Practical part: Case studies in the field of freight transport and transport of dangerous goods in road traffic.

## Literature:

- 1. Spagnut, D. (1995). Transportne osobine robe, Saobraćajni fakultet, Beograd
- 2. Jovanović, V. (2005). Transport opasnih materija. Saobraćajni fakultet, Beograd.
- 3. Tepić, J. Tanackov, I. Stojić, G. Sremac, S. (2012). Poznavanje robe u transportu 2, Fakultet tehničkih nauka, Novi Sad.
- ADR 2015, Evropski sporazum o međunarodnom drumskom transportu opasnog tereta, Knjiga 1, Ujedinjene Nacije, Njujork i Ženeva, 2014
- ADR 2015, Evropski sporazum o međunarodnom drumskom transportu opasnog tereta, Knjiga 2, Ujedinjene Nacije, Njujork i Ženeva, 2014.
- 6. Zakon o prevozu opasnog tereta "Službeni glasnik RS", broj 88/2010.
- 7. Pravilnik o načinu transporta opasnog tereta u drumskom saobraćaju, "Služb.glasnik RS", broj 125/14.

Total number of active classes: 60 Theory classes: 30 Practical classes: 30

#### **Teaching methods:**

Lectures. Auditory and computer exercises related to actual case studies regarding transport of dangerous goods. Individual consultations or consultations in small groups. Homework.

# 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 lectures	max 5	Oral exam	max 50
Practical teaching	max 5		
colloquium	max 20		
seminary	max 20		
Minimum for the final exam	30		