



GRADUATE STUDY: **TRAFFIC AND TRANSPORT, RAILWAY TRANSPORT**

Syllabus

Academic year 2023/2024

Course:		Railway Transport Management			
Head of course: Assoc. Prof. Borna Abramović , Ph.D.					
Co-lecturers: Denis Šipuš , Ph.D.					
Semester: 4	Course code: 60614	Lectures: 30	Auditory exercises: 20	Seminars: 10	ECTS credits: 6
Group for lectures: 20 students			Group for auditory exercises and seminars: 20 students		

Objective of the course:

- Familiarize students with the principles of railway transport management.
- Students will understand the mechanisms of the railway transport market, will use the methods and procedures for investigations of transport demand, the statistics in the railway transport, define a marketing information system, calculate the cost of the train, to determine the cost of transportation, to measure the success of railway companies, to understand the integrated transport system in the railway system, to understand and calculate fees for railway infrastructure.

Learning outcomes:

After the completion of the course the students will be able to:

1. Define the basic terms in the field of railway market transport management.
2. Describe the mechanisms of railway market transport.
3. Calculate the railway costs and price of services in domestic and international transport.
4. Divide the cost of the railway system and the cost of services.
5. Comment on performance measures in the railway sector.
6. Valorise appropriate market research models.
7. Integrate transport modes into a common traffic system.



LECTURES, EXERCISES and SEMINARS

Week	Syllabus	Form of classes	Performed by	Lessons	Remark
1.	<ul style="list-style-type: none">Introduction of a new required course "Railway Transport Management"Rail transport market I	L	Borna Abramović	4	
2.	<ul style="list-style-type: none">Rail transport market IIStatistics in railway transport	L	Borna Abramović	4	
3.	<ul style="list-style-type: none">The research of transport demand I	L	Borna Abramović	4	
4.	<ul style="list-style-type: none">The research of transport demand IIMarketing information system	L	Borna Abramović	4	Making of case studies
5.	<ul style="list-style-type: none">CostsTrain costs	L	Borna Abramović	4	
6.	<ul style="list-style-type: none">Infrastructure charging feesTransportation fees	L	Borna Abramović	4	
7.	<ul style="list-style-type: none">Measures of success	L	Borna Abramović	2	
8.	<ul style="list-style-type: none">Measures of success	S	Denis Šipuš	2	



9.	<ul style="list-style-type: none">▪ Integrated transport systems	L	Borna Abramović	4	
10.	<ul style="list-style-type: none">▪ Case study MIS	S	Denis Šipuš	4	
11.	<ul style="list-style-type: none">▪ Investments	S	Denis Šipuš	4	
12.	<ul style="list-style-type: none">▪ Applied statistics in railway transport	AE	Denis Šipuš	4	
13.	<ul style="list-style-type: none">▪ Fixed costs▪ Variable costs	AE	Denis Šipuš	4	
14.	<ul style="list-style-type: none">▪ Average costs▪ Marginal costs	AE	Denis Šipuš	4	
15.	<ul style="list-style-type: none">▪ The annual reports of companies	AE	Denis Šipuš	4	

L = Lectures; AE = Auditory Exercises; LE = Laboratory Exercises; S = Seminars





STUDENT OBLIGATIONS AND EXAMS

Conditions for obtaining signatures:

Attendance is mandatory and students are required to attend at least 50% of the classes. After the lectures and successfully defended the case study, the necessary conditions for obtaining signatures.

Written exam:

During the semester, conducted two tests, first short exam is numerically and the other is the theory. In case he does not pass both tests the student goes to the written part of the exam.

Oral exam:

In order to attend oral exam student must pass written exam.

LITERATURE

a) Obligatory literature:

1. Bogović, B.: Prijevozi u željezničkom prometu, Fakultet prometnih znanosti, Sveučilišta u Zagrebu, Zagreb, 2006.
2. Abramović, B.: Modeliranje potražnje u funkciji prijevoza željeznicom, Fakultet prometnih znanosti, Sveučilišta u Zagrebu, Zagreb, 2010.
3. Abramović, B.: Tehnološki model pristojbi za željezničku infrastrukturu, Fakultet prometnih znanosti, Sveučilišta u Zagrebu, Zagreb, 2007.

b) Recommended literature:

1. Reforming Europe's Railways – Learning from Experience, EuRailPress, Hamburg, 2011.
2. Samuelson, P.A., Nordhaus, W.D.: Ekonomija, MaTe – McGraw-Hill, Zagreb, 2000.





METHODOLOGY OF THE IMPLEMENTATION OF THE COURSE PLAN

1. LECTURES

In the course of the lectures the theoretical framework of the curriculum is presented and followed by practical examples. To this end Power Point presentations are used.

2. AUDITORIAL EXERCISES

In the course of exercises students are required to practice diverse calculations solving challenges in order to define all necessary parameters for a railway transport system.

3. SEMINARS

The seminar was conducted by the interaction with the students, so it is essential to active participation of students in order to successfully solve the problem.





1. DOCUMENTATION

Attendance list is signed by students prior to every lecture.

2. ECTS CREDITS

Activity	ECTS credits
Class attendance	2
Oral exam	2
Written exam	2
In total:	6

METHODS OF MONITORING QUALITY THAT ENSURE ACQUISITION OF EXIT COMPETENCES

The student's attendance record is kept during the semester. At the end of the semester an evaluation of the quality and efficiency of the course and the lecturers will be carried out. Information on the achievement of learning outcomes and student progress will be used by teachers for self-evaluation and improvement of teaching methods.

