

DESCRIPTION OF A STUDY COURSE – SYLLABUS

Title of a course	Transport and Ecology				
Head of course	MSc Dorotea Žic, Lecturer				
Study programme	Professional undergraduate study Road Transport Professional undergraduate study Railroad Transport				
Status of a course	Obligatory				
Year of study	1.	Semester	II	ECTS credits	3
Teaching plan (L + E + S+ Pr)	(2+0+1+0)				
Goals of a course					
The aim of the course is to acquaint students with the ability of analytical thinking and logical reasoning with the development, global impact and ecological problems of transport on the environment according to modern requirements and criteria related to the preventive action and sustainability of road, air, rail and other transport, which affects human health. plants, animals and ecosystems. After becoming familiar with the basic principles, elements and characteristics of transport and ecology, the course aims to introduce students to content through set topics relevant to their later work in the practice of transportation companies and other businesses in a climate of growing environmental awareness.					
Conditions for enrolling course					
No conditions					
Learning outcomes on a level of a study programme which includes course					
Expected learning outcomes on a level of a course					
<ol style="list-style-type: none"> 1. Define the concepts, principles and characteristics of transport ecology 2. Explain the development and impact of road transport on the environment with preventive action 3. Explain important milestones in the development of air transport for environmental protection 4. Explain the environmental impact of railroad transport and electromagnetic radiation 5. Explain the impact of transport on the environment 					
Content of a course					
Ecosystem, biosphere, biodiversity, food chain. Ecological factors – ecological minimum, maximum, optimum, ecological valency. Biotic ecological factors; species interactions. Abiotic ecological factors: physical, chemical, biological. Influence of traffic on environment: influence on biodiversity; pollution: types of pollution. Physical factors; electromagnetic radiation, warmth, thermal indexes, noise and vibrations. Chemical factors; types of noxious chemicals in environment – classification, mechanisms and effects. Toxicants, mutagens, cancerogenic, teratogens. Noxious gasses and vapours. Traffic and settlement ecology; influence of traffic on quality of air, water, ground; influence on life quality. Transport of dangerous substances. Global and climate issues; climate changes, thermal pollution, global warming, greenhouse gasses and “greenhouse effect”, stratospheric ozone layer and ozone-depleting substances; far reaching excessive air pollutions. Traffic and sustainable development.					
Teaching modes	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> auditory exercises <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> distance learning <input type="checkbox"/> field classes		<input checked="" type="checkbox"/> individual assignments <input type="checkbox"/> multimedia and network <input type="checkbox"/> laboratory <input type="checkbox"/> supervisor's work <input type="checkbox"/> other _____		
Comments	Exposed course material is determined through lectures, seminars, surveys, answers to exam questions as brief knowledge tests and discussions in the dynamic interaction between professor and student.				
Students' obligations					

Meet the obligations prescribed in the Study Regulations and the Regulations on the assessment of students

Grading, evaluation and monitoring of students' work continuously during lectures and exams

Grading is based upon evaluation of course's learning outcomes' adoption. Grading is performed continuously during lectures and/or during exam, in compliance with the provisions of Regulation on the assessment of students.

Continuous check-up:

Outcomes	Pre-exam I	Pre-exam 2	Seminar work	Home assignment	Test	Threshold	Max
Outcome 1				2%	14%	8%	16%
Outcome 2	30%			2%		16%	32%
Outcome 3		18%		2%		10%	20%
Outcome 4		18%		2%		10%	20%
Outcome 5			8%	4%		6%	12%
Percentage of ECTS	0,9	1,08	0,24	0,36	0,42	-	-
Total	30%	36%	8%	12%	14%	50%	100%

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

Exam term:

Outcomes	Written exam	Oral exam	Max
Outcome 1	12%	4%	16%
Outcome 2	28%	4%	32%
Outcome 3	16%	4%	20%
Outcome 4	16%	4%	20%
Outcome 5	8%	4%	12%
Percentage of ECTS	2,4	0,6	-
Total	80%	20%	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

Grading:

A student has passed the exam if he has acquired at least 50% of anticipated credits of a specific learning outcome.

If a student has passed learning outcomes of all courses, the accomplished credits (percentages) of all passed learning outcomes are being added, while the final grade is defined upon following table:

Range of credits (percentages)	Numerical grade	ECTS grade
90,00 – 100,00	Excellent (5)	A
75,00 – 89,99	Very good (4)	B
60,00 – 74,99	Good (3)	C
50,00 – 59,99	Sufficient (2)	D
0,00 – 49,99	Insufficient (1)	F

Obligatory literature

1. Golubić, J.: **Promet i okoliš**, Fakultet prometnih znanosti, Zagreb, 2004.
2. Smojver, Ž.: **Promet i ekologija**, skripta, Veleučilište u Rijeci, Rijeka, 2017.
3. Fanuko, N.: **Ekologija**, Udžbenik za stručne studije vinarstva i mediteranske poljoprivrede, Veleučilište u Rijeci, Poreč, Rijeka, 2005.

Additional literature

1. Glavač, V.: **Uvod u globalnu ekologiju**, II ispravljeno i dopunjeno izdanje Hrvatska sveučilišna naklada, Ministarstvo zaštite okoliša i prostornog uređenja, Pučko otvoreno učilište, Zagreb, 2001
2. Valić, F. i sur.: **Zdravstvena ekologija**, Medicinska naklada, Zagreb, 2001.
3. **Strateške odrednice za razvoj zelenog gospodarstva – Zeleni razvoj Hrvatske**, Prijedlog strateških odrednica za razvoj zelenog gospodarstva – Zeleni razvoj Hrvatske, na 153. sjednici Vlada Republike Hrvatske - nacrt Ministarstvo zaštite okoliša, prostornog uređenja i graditeljstva, rujan 2011.
<https://vlada.gov.hr/UserDocsImages//2016/Sjednice/Arhiva//117153.%20-%201.3.pdf> (1.09.2018.)

