Department of Postal Transport
Chair of Postal Transport Technology

UNIVERSITY OF ZAGREB
FACULTY OF TRANSPORT AND TRAFFIC SCIENCES

GRADUATE STUDY: TRANSPORT

SEMESTER (II)

Syllabus

Academic year 2023/2024

Course:	**Courier Services Technologies**					
Head of course: prof. **Zvonko Kavran**, Ph.D.						
Co-lecturers: **Katarina Mostarac**, Ph.D.						
Semester: **II**	Course code: **74491**	Lectures: **30**	Auditory exercises: **30**	Laboratory exercises:	Seminars:	ECTS credits: **6**
Group for lectures: **15 students**			Group for auditory and laboratory exercises: **15 students**			

Objective of the course:

- Understanding the significant courier processes, services and technologies of courier and express services in the field of postal traffic.
- Educate for the specifications and evaluation development of technological procedures in the process of receiving and transporting shipments.

Learning outcomes:

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

1. Distinguish processes in the technological phases of courier services
2. Sketch a diagram of each technological phase of courier processes.
3. Solve the transport and assignment problem of the postal service provider.
4. Compare e-shopping models.
5. Comment on different shipment delivery models.
6. Present understanding of matter by solving a program task.

LECTURES, EXERCISES and SEMINARS

Week	Syllabus	Form of classes	Performed by	Lessons	Remark
1.	▪ Introduction lecture (familiarization with course content, literature, student responsibilities, dates of first and second colloquium, the conditions for the signature, examination)	L	Katarina Mostarac	2	Dates of colloquium
	▪ Program tasks (deadlines of the topic registration, submission and oral presentation, title of tasks, rules of drafting).	AE	Katarina Mostarac	2	Program tasks topic proposal via Merlin (merlin.srce.hr)
2.	▪ Technological processes in the central office of the distribution area ▪ Technological processes in the arrival and delivery of shipments	L	Katarina Mostarac	2	
	▪ Presentation of technological processes using diagrams	AE	Katarina Mostarac	2	
3.	▪ Analysis of shipment transfer technology. ▪ Technological processes in shipment transport	L	Katarina Mostarac	2	
	▪ Transport problem. Application of basic and optimal solution methods	AE	Katarina Mostarac	2	
4.	▪ Analysis of the activities of the courier service provider	LE	Katarina Mostarac	2	
	▪ Assignment problem. Application of the Hungarian method.	AE	Katarina Mostarac	2	

5.	▪ Business of traditional postal and logistics service providers	L	Zvonko Kavran	2	Field classes (visit to a firm)
	▪ Analysis of technological processes in the call center and sorting center	AE	Katarina Mostarac	2	
6.	▪ Key performance indicators in the postal sector	L	Katarina Mostarac	2	
	▪ Examining the relationship between variables. ▪ Statistical methods ▪ Regression model	AE	Katarina Mostarac	2	
7.	▪ Basic concepts of e-shopping	L	Katarina Mostarac	2	
	▪ Repetition of teaching materials ▪ First colloquium	AE	Katarina Mostarac	2	First colloquium
8.	▪ E-shopping models	L	Katarina Mostarac	2	
	▪ Own shopping model design	AE	Katarina Mostarac	2	
9.	▪ Information and communication technologies on shipments pick-up	L	Zvonko Kavran	2	
	▪ Application of network planning	AE	Katarina Mostarac	2	

10.	▪ Analysis of technological processes in the logistics center	LE	Katarina Mostarac	2	Field classes (visit to a firm)
	▪ Dynamic management of postal and logistics processes	AE	Katarina Mostarac	2	
11.	▪ Information - communication technologies during shipment delivery	L	Katarina Mostarac	2	
	▪ Tracking shipments over the Internet and during e-shopping	AE	Katarina Mostarac	2	
12.	▪ Delivery models. Last mile concept.	L	Zvonko Kavran	2	
	▪ Delivery models comparisons	AE	Katarina Mostarac	2	Deadline for submission of program tasks
13.	▪ Technological processes of e-shopping providers	L	Katarina Mostarac	2	
	▪ Oral presentation of program tasks by students using *e.g. MS Power Point*	S	Katarina Mostarac	2	Deadline for seminar evaluation (grade)
14.	▪ AB delivery model	L	Zvonko Kavran	2	
	▪ Oral presentation of seminar by students using *e.g. MS Power Point*	S	Katarina Mostarac	2	

15.	▪ Internet of Postal Things (IoPT) concept	L	Zvonko Kavran	2	Second colloquium
	▪ Revision of course matter.	AE	Katarina Mostarac	2	

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

STUDENT OBLIGATIONS AND EXAMS

Conditions for obtaining signatures:
During the semester, the student may justifiably miss a total of three teaching dates (lectures and auditory exercises). Also, it is mandatory to create and present program task to the audience. Program tasks can be made in groups, according to the agreement with the teacher. Students are encouraged to choose the topics of the program tasks in which the emphasis will be placed on the conducted research (surveys, own research, application of knowledge acquired in lectures and auditory exercises). Only quality program assignments that will show the research work of students will be taken into account in the assessment. Approved and evaluated program task is a condition for obtaining a signature. Without a signature in the index, a student cannot access the written or oral part of the exam.

Written Examination:
Course can be passed in following ways:

- Two colloquia - the first is held in the middle of the semester, approximately after 7 thematic units of lectures and auditory exercises. Students who successfully pass the first colloquium get the right to take the second colloquium. The second colloquium is taken at the end of the semester. To pass each colloquium, the student must solve at least 60% of the test. Students who successfully pass both colloquia are exempt from the written part of the exam.
- Written exam - access to the written part of the exam is achieved by those who have exercised the right to sign (attendance at classes and graded program assignment). For successfully passing the written part of the exam, the student must solve at least 60% of the exam correctly.

Oral examination:
Oral part of the exam is held after successfully passing the written exam (written exam or successfully passing both colloquia).

LITERATURE

a) Obligatory literature:

- Kavran Z.: Tehnologija kurirskih procesa, predavanja, FPZ, Zagreb, 2022.
- Mostarac, K.: Tehnologija kurirskih procesa, predavanja i auditorne vježbe, FPZ, Zagreb, 2022.

b) Recommended literature:

- International Journal of Physical Distribution & Logistics Management Postal Technology International
- Universal Postal Union, Union Postale Magazine
- www.dhl.hr
- www.fedex.com
- www.hakom.hr
- www.posta.hr
- www.upu.int

METHODOLOGY OF THE IMPLEMENTATION OF THE COURSE PLAN

1. LECTURES

Lectures are conducted through PowerPoint presentations. Discussion of the topics covered is encouraged, as well as independent work through the assignment of program tasks and assignments. The use of multimedia content and the Internet is also used for individual thematic units. Lecture materials will be available through the Merlin system, where additional literature will also be available to supplement the lectures. It is mandatory, and it is assumed that the student will consult all available literature on the Merlin system in preparation for the exam.

2. AUDITORY EXERCISES

Exercises are performed through PowerPoint presentations and using a board. Students are given tasks that test their understanding of the technological processes of courier services and encourage their independent reasoning and reasoning. Video contents are shown that show in more detail the technologies used in the technological processes of courier services. Materials from the auditory exercises will be available through the Merlin system, where additional literature will also be available to supplement the auditory exercises. It is mandatory, and it is assumed that the student will consult all available literature on the Merlin system in preparation for the exam.

Note: Individual and/or group viewing negative written test

Individual viewing of negative written test is possible after each colloquium and/or final written exam, during teacher consultation hours (of teacher who held the exams) or during designated period which is published with the results of the colloquium and/or final written exam.

3. DOCUMENTATION

Records are kept on the presence of students in lectures and exercises, the results of colloquia and program assignments, which are publicly available through the Merlin system.

4. SCORING SYSTEM

Table 1 The scoring system for the monitoring of students and explained credit values in ECTS credits

no	Segment:	Required credits to be achieved:		Remark:	ECTS credits
		Min.	Max.		
*Points for the realization of the condition: Courses requirements achieved**					
1.	Presence at the lectures	5	5	During the semester three absences are allowed, i.e. 20% of all forms of classes (lectures and exercises).	**1**
2.	Presence at the exercises (auditory and laboratory)	5	5		**1**

3.	Program task		20	45	Students must successfully defend the seminar	**1,5**
	Other points					
4.	First colloquium	= Written exam	20	50	Students must pass both colloquiums or min 60% on written final exam.	**1**
5.	Second colloquium		70	100		**1**
6.	Oral exam		/	/	At the final exam, a final grade is formed based on the written examination and oral examination. The final grade is than entered in the ISVU system.	**0,5**
Σ	*Overall points:*				*Overall ECTS points:*	**6**

Table 2 - Explanation of the credit values in evaluations

CREDITS:	Estimate based on attendance, seminar paper and two colloquies (or written exam) - [4 ECTS]*:	The final score [6 ECTS]*:
120 – 130	Sufficient (2)	Exemption from the written part of the exam, the final grade after oral exam.**
140 – 160	Good (3)	
165 - 195	Very good (4)	
195 – 205	Excellent (5)	

Information for students (scoring system, implementation plan, learning outcomes, syllabus, literature, consulting teachers, announcement of results of examinations or colloquium, and all other information):

- **https://moodle.srce.hr/2022-2023/ (https://merlin.srce.hr)**
- **http://www.fpz.unizg.hr/isvu/2020-en/**

Student assistants:
Additional individual work with the students through individual consultations for assignments from seminar essay, as well as for insight into the negatively written part of the exam or colloquium.