



UNDERGRADUATE STUDY: **AERONAUTICS**

SEMESTER (IV)

Syllabus

Academic year 2023/2024

Course:		Radiotelephony Communications II			
Head of course: Ivana Francetić, B.A.					
Co-lecturers:					
Semester: IV	Course code: 36166	Lectures: 15	Auditory exercises: 15	Laboratory exercises:	ECTS credits: 3
Group for lectures: 20 students			Group for auditory and laboratory exercises: 20 students		

Objective of the course:

- To identify standard phraseology applicable in the radar environment by presenting examples of phraseology use in specific situations.
- To identify scenarios where mutual understanding of the work environment and the loads of pilots and air traffic controllers is extremely important.
- To develop a culture of listening and respecting standard phraseology.

Learning outcomes:

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

1. Use prescribed phraseology and perform radar identification, vectoring and provide position report.
2. Apply phraseology examples to aircraft level changes.
3. Harmonize and apply IFR and VFR phraseology arrival procedures, holding procedures and traffic clearances within it.
4. Distinguish between distress and urgency and reproduce situations using standard phraseology tailored to the situation.
5. Compare radio failure situations and apply appropriate phraseology.
6. Design a flight in a radar environment and reproduce the most important situations using standard phraseology.



LECTURES and EXERCISES

Week	Syllabus	Form of classes	Performed by	Lessons	Remark
1.	<ul style="list-style-type: none"> Introduction into course. Radar identification. Position reporting. 	L	Ivana Francetić	2	
2.	<ul style="list-style-type: none"> Level changes 	L	Ivana Francetić	2	
3.	<ul style="list-style-type: none"> Radar phraseology – vectoring 	L	Ivana Francetić	1	
	<ul style="list-style-type: none"> Radar phraseology – vectoring. 	AE	Ivana Francetić	1	
4.	<ul style="list-style-type: none"> Speed control 	L	Ivana Francetić	1	
	<ul style="list-style-type: none"> Speed control 	AE	Ivana Francetić	1	
5.	<ul style="list-style-type: none"> Traffic information and avoiding action. 	L	Ivana Francetić	1	
	<ul style="list-style-type: none"> Traffic information and avoiding action. 	AE	Ivana Francetić	1	
6.	<ul style="list-style-type: none"> SSR operating instructions. 	L	Ivana Francetić	1	



	<ul style="list-style-type: none"> SSR operating instructions 	AE	Ivana Francetić	1	
7.	<ul style="list-style-type: none"> Intersemestral quiz 1 	2	Ivana Francetić	2	
8.	<ul style="list-style-type: none"> After take-off, IFR/VFR departures (SIDS). IFR/VFR arrivals (STARS). Holdings. 	L	Ivana Francetić	1	
	<ul style="list-style-type: none"> After take-off, IFR/VFR departures (SIDS). IFR/VFR arrivals (STARS) Holdings. 	AE	Ivana Francetić	1	
9.	<ul style="list-style-type: none"> Distress and urgency messages 	L	Ivana Francetić	1	
	<ul style="list-style-type: none"> Distress and urgency messages 	AE	Ivana Francetić	1	
10.	<ul style="list-style-type: none"> Radio communication failure. Change of flight rules/Flight plan. 	L	Ivana Francetić	1	
	<ul style="list-style-type: none"> Radio communication failure. Change of flight rules/Flight plan 	AE	Ivana Francetić	1	
11.	<ul style="list-style-type: none"> TCAS, RNAV, RVSM, fuel dumping. Military RT procedures (Practice Flights; Signals and signs for interception). 	L	Ivana Francetić	1	
	<ul style="list-style-type: none"> TCAS, RNAV, RVSM, fuel dumping. Military RT procedures (Practice Flights; Signals and signs for interception). 	AE	Ivana Francetić	1	



12.	<ul style="list-style-type: none">▪ Radar handover▪ Co-ordination between ATS units (transfer of control, approval request, etc.)	L	Ivana Francetić	1	
	<ul style="list-style-type: none">▪ Radar handover▪ Co-ordination between ATS units (transfer of control, approval request, etc.)	AE	Ivana Francetić	1	
13.	<ul style="list-style-type: none">▪ Approach control phraseology	L	Ivana Francetić	1	
	<ul style="list-style-type: none">▪ Approach control phraseology	AE	Ivana Francetić	1	
14.	<ul style="list-style-type: none">▪ Intersemestral quiz 2	AE	Ivana Francetić	2	
15.	<ul style="list-style-type: none">▪ Homework check▪ Quiz revision	L	Ivana Francetić	2	

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



STUDENT OBLIGATIONS AND EXAMS

Conditions for obtaining signatures:

The student acquires the right to get the "completed" course status if they have attended at least 80% the lectures and 80% of exercises. The attendance in the percentage lower than 80% at lectures and exercises may be justified by adequate medical note. The student is required to bring in 3 (three) homework papers or 2 (two) short test. There are no pre-conditions from other courses except basic knowledge of the English language.

Written exam:

There are two ways of passing the exam:

- a) **Written quizzes** – consists of writing two written tests during the semester. The first quiz can be attended by all students enrolled in the course in the current academic year. The second quiz at the end of the semester can be attended by the students who have acquired a positive grade from quiz 1.
- b) **Written test** – consists of a final written exam during regular examination periods. The written exam can be attended by students who are eligible for signature.

Oral exam: To attend the oral part of exam, the student has to pass two written quizzes or the final written exam.

LITERATURE

a) Obligatory literature:

1. Material published on Merlin system
2. AIC A 006/2017 Postupci za obavljanje govorne komunikacije, HKZP, listopad 2017
3. Commission Implementing Regulation (EU) 2016/1185, 20 July 2016
4. Commission Implementing Regulation (EU) No 923/2012, 26 September 2016
5. Doc 9432, Manual of Radiotelephony, ICAO, 2006

b) Recommended literature:

1. Doc 4444, Air Traffic Management, ICAO, 2007
2. ICAO Annex 2, latest edition
3. ICAO Annex 10, Vol. II, Ch. 5, latest edition
4. Robertson, F. A., Airspeak, Pearson Longman, 2008
5. JAA TEST PREP, VFR COMM/IFR COMM, Aviationexam.com, 2006
6. Communications, JAA ATPL Training, Jeppesen Sanderson Inc., 2004
7. 090 Communication, JAA ATPL theoretical Knowledge Manual, Jeppesen GmbH, 2002





METHODOLOGY OF THE IMPLEMENTATION OF THE COURSE PLAN

1. LECTURES

Lectures follow material given on Merlin. New Aviation English terminology is being presented and the principles and standards of radiotelephony communication are explained.

2. AUDITORIAL EXERCISES

The basic function of the exercises is to practice voice communication. Auditory materials are also used, especially for independent student work at home or in the laboratory. The language skills of speaking and listening are practiced. The importance of linking ICAO Level 4 Aviation English and RT communication is emphasized in order to achieve fluency and precision in radio communication as an inevitable safety factor.





3. DOCUMENTATION

Kept electronic records of presence in lectures and exercises (students carry out records using student cards). There is a paper and electronic record database in Excel for all student. All written exams are being kept at the Department of aeronautics.

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.		
1.	Presence in lectures				0.5
2.	3 homeworks or 2 tests				0.5
4.	2 quizzes = written exam				1
5.	Oral exam				1
Σ					3





Table 2 - Explanation of the credit values in evaluations:

Achieved % in the written exam	Grade
96 - 100%	Excellent (5)
92 - 95 %	Very good (4)
88 - 91 %	Good (3)
85 - 87%	Sufficient (2)

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

- <http://www.fpz.unizg.hr>

