<table>
<tr><td colspan="2">NAME OF THE COURSE</td><td colspan="5">FORENSICS AND SECURITY OF ARTIFICIAL INTELLIGENCE SYSTEM</td></tr>
<tr><td>Code</td><td>FZ286</td><td>Year of study</td><td colspan="4">2.</td></tr>
<tr><td>Course teacher</td><td>Prof. dr. sc. Josip Kasum</td><td>Credits (ECTS)</td><td colspan="4">3</td></tr>
<tr><td rowspan="2">Associate teachers</td><td rowspan="2">Marko Pilić, mag. forens.</td><td rowspan="2">Type of instruction (number of hours)</td><td>L</td><td>S</td><td>E</td><td>F</td></tr>
<tr><td>15</td><td>0</td><td>15</td><td>0</td></tr>
<tr><td>Status of the course</td><td>Elective</td><td>Percentage of application of e-learning</td><td colspan="4"></td></tr>
<tr><td colspan="7">COURSE DESCRIPTION</td></tr>
<tr><td>Course objectives</td><td colspan="6">Mastering the usage of various engineering and scientific methods in forensic approaches to artificial intelligence systems.</td></tr>
<tr><td>Course enrolment requirements and entry competences required for the course</td><td colspan="6">Requirements for course enrollment are defined by the Regulations at the University Department of Forensic Sciences and by the Regulations on Studies and System of Studies at the University of Split.</td></tr>
<tr><td>Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</td><td colspan="6">1. Introduction to an artificial intelligence systems.
2. Classify important elements of the artificial intelligence systems.
3. Confirm the working principles of artificial intelligence systems.
4. Using forensic methods, re-examine the work of artificial intelligence.
5. Using forensic methods, determine artificial intelligence system failure.
6. Classify forensic approaches to the decision-making process of artificial intelligence systems in different traffic systems.</td></tr>
<tr><td>Course content broken down in detail by weekly class schedule (syllabus)</td><td colspan="6">Course content:
L1. Artificial Intelligence, Systematic Approach
L2. Classification of artificial intelligence
L3. Philosophical approach and artificial intelligence
L4. Data, information, great data
L5. Data mining systems
L6. Expert systems
L7. Neural networks, intelligent agents and classification
L8. Evolution in connection with computerization
L9. The work of artificial intelligence and forensic science
L10. Forensic research of artificial intelligence system faults
L11. Modern systems of artificial intelligence and general application
L12. Forensic approach to the analysis of the decision-making process of artificial intelligence systems in different transport systems
L13. Application of artificial intelligence system in land transport
L14. Application of artificial intelligence system in air traffic
L15. Application of artificial intelligence system in Maritime traffic
Exercise Content:
E1. Legal Basis of Artificial Intelligence. Systematic description of realistic artificial intelligence systems.
E2. Analysis of subsystems and elements of a selected artificial intelligence system.
E3. Working principles of selected artificial intelligence systems.
E4. Forensic analysis of selected artificial intelligence systems
E5. Artificial Intelligence System faults, Forensic Approach
E6. The process of deciding the code of selected artificial intelligence systems by forensic approach
E7. Exploration of data mining system based on data, information and large data
E8. Forensic analysis of the work of the selected expert system
E9. An example of the operation of neural networks
E10. Intelligent agents and application
E11. Interdisciplinarity, multidisciplinarity and transdiciplinarity in relation to artificial</td></tr>
</table>

	intelligence E12. An example of modern systems of artificial intelligence with general application E13. An example of artificial intelligence system in land traffic E14. An example of artificial intelligence system in air traffic E15. An example of artificial intelligence in maritime Traffic

Format of instruction	☒ lectures ☒ seminars and workshops ☐ exercises ☒ *on line* in entirety ☐ partial e-learning ☐ field work	☐ independent assignments ☐ multimedia ☐ laboratory ☐ work with mentor ☐ (other)

Student responsibilities	**Obligations of full - time students**: Lectures and exercises are obligatory for students and records of attendance are kept. In order to get a professors signature, students must attend a minimum of 70% of lectures and exercises. In case of insufficient number of arrivals, no signature will be given or the right to attend the exam. Students can not justify or replace the attendance with a regular note. Students who, due to illness or for some other justified reason, have not met the conditions for signature and are missing up to 20%, will be able to do so by consulting and developing additional tasks. All other students, ie those who have realized less than 50% of required attendance, are not eligible for a signature and are required to enroll in a college next year. **Obligations of part - time students:** Same as full - time.

Screening student work *(name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)*						
	Class attendance	1	Research		Practical training	
	Experimental work		Report		Research paper	
	Essay		Seminar essay	1		
	Tests		Oral exam	1		
	Written exam		Project			

Grading and evaluating student work in class and at the final exam

Grading elements	Success (min.%)	Percentege in grade (%)
Class attendance	95	50
Essay		

Završna procjena

Verification indicators - final exam	Success (min.%)	Percentege in grade (%)
Previous activities (including all continuous check indicators)	**100**	50
Elementary concepts	**95**	20
Exam (written or oral)	**50**	30

Grading - minimum for passing the exam: 50%

Points (%)	Criteria	Grade
0- 49	Does not meet the minimum criteria	Insufficient (1)
50-64	Meets the Minimum Criteria)	Sufficient (2

	65-79	Average success with noticeable shortcomings	Good (3)
	80-89	Above the average success with a few mistakes	Very good (4)
	90-100	Outstanding success	Excellent (5)

	Title	Number of copies in the library	Availability via other media
Required literature (available in the library and via other media)	Warwick K., *Artificial intelligence*, The basics, Routledge, 2012, New York Luger, F. George, Artificial intelligence – structures and strategies for complex problem solving, 1989, sixth edition Russell S., Norvig, P., Artificial Intelligence – A modern approach, 2016., England		
Optional literature (at the time of submission of study programme proposal)	Artificial intelligence for Europe - https://eur-lex.europa.eu/legal-content/HR/TXT/?uri=CELEX%3A52018DC02373 Naval Artificial Intelligence - https://www.researchgate.net/publication/318655874_Naval_Artificial_Intelligence		
Quality assurance methods that ensure the acquisition of exit competences	• Analysis of the success of studying programme in all classes. • Students survey on the quality of teachers and teaching process for each class. • The exam conducted by the teacher examines all learning outcomes of the class.		
Other (as the proposer wishes to add)			