

R PROGRAMMING AND MACHINE LEARNING APPLICATIONS

1	Course Title:	R PROGRAMMING AND MACHINE LEARNING APPLICATIONS	
2	Course Code:	EEM4122	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	8	
7	ECTS Credits Allocated:	5.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. GIYASETTİN ÖZCAN	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Bilgisayar Müh. Bölüm Binası, 1. kat, oda 107 Tel.:+90 (224) 294 2792 email: gozcan at uludag.edu.tr	
17	Website:		
18	Objective of the Course:	To learn the logics of R programming. To learn fundamental concepts of R programming. To learn the concepts of CRAN and Bioconductor packages. To learn to implement machine learning applications	
19	Contribution of the Course to Professional Development:	Writing general purpose R program codes	
20	Learning Outcomes:		
		1	Students will learn to install R and R studio
		2	Students will learn to exploit CRAN and Bioconductor packages.
		3	Students will be able to write machine learning implementations with R.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	R and R Studio Installation, basic implementation		
2	Fundamental arithmetic operators		
3	Variables		

4	For, if loops	
5	While, switch loops	
6	R functions	
7	Vector, matrice	
8	Data frame, factor	
9	CRAN packages, graphics	
10	Machine learning implementations	
11	Bioconductor packages	
12	Bioinformatics implementations	
13	Deep learning packages	
14	Deep learning implementations	

22	Textbooks, References and/or Other Materials:	Lecture Notes
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23	Assesment
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TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	35.00
Quiz	0	0.00
Home work-project	2	5.00
Final Exam	1	60.00

Activites	Number	Duration (hour)	Total Work Load (hour)
Contribution of Final Exam to Success Grade	60.00	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preparation	0	0.00	0.00
Measurement and Evaluation Techniques Used in the Measurement and evaluation is carried out according to	0	0.00	0.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00

24 EFFECTS / WORK LOAD TABLE			
Field Studies	0	0.00	0.00
Midterm exams	1	50.00	50.00
Others	0	0.00	0.00
Final Exams	1	58.00	58.00
Total Work Load			200.00
Total work load/ 30 hr			5.00
ECTS Credit of the Course			5.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	5	3	3	2	1	1	1	1	1	1	1	0	0	0	0
ÖK2	5	2	2	3	2	1	1	1	1	1	1	1	0	0	0	0
ÖK3	5	5	3	3	2	1	1	1	1	1	1	1	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High
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