

WIRELESS COMMUNICATION I

1	Course Title:	WIRELESS COMMUNICATION I	
2	Course Code:	EEM6411	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. ARİF BAŞGÜMÜŞ	
15	Course Lecturers:	Dr. Öğr. Üyesi Arif BAŞGÜMÜŞ	
16	Contact information of the Course Coordinator:	E-posta: basgumus@uludag.edu.tr Tel: (224) 275 5253 Elektrik-Elektronik Mühendisliği Bölümü, 5. Kat, Ofis No:543	
17	Website:	https://sites.google.com/site/basgumus/teaching?authuser=0	
18	Objective of the Course:	To teach the principles of wireless communication and cellular communication.	
19	Contribution of the Course to Professional Development:	Application skills in radio communication systems.	
20	Learning Outcomes:		
		1	Cellular Communication Structure
		2	Radio Communication Systems and Standards
		3	Channel Models in Wireless Communication
		4	Fading and Shadowing
		5	Doppler Propagation
		6	Cascade Faded Channels
		7	Simulation Techniques for Wireless Communication
		8	Digital Modulation Techniques
		9	Digital Communication in Fading Channels and Error Performance Analysis
		10	Diversity and Multiple Access Techniques
21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Cellular Communication Structure		
2	Radio Communication Systems and Standards		
3	Channel Models in Wireless Communication		

4	Channel Models in Wireless Communication	
5	Fading and Shadowing	
6	Doppler Propagation	
7	Cascade Faded Channels	
8	Simulation Techniques for Wireless Communication	
9	Simulation Techniques for Wireless Communication	
10	Digital Modulation Techniques	
11	Digital Communication in Fading Channels	
12	Error Performance Analysis	
13	Diversity Techniques	
14	Multiple Access Techniques	

22	Textbooks, References and/or Other Materials:	1. J. G. Proakis, M. Salehi, Digital Communications, MacGraw-Hill, 5th Edition, 2018.
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Activites			Number	Duration (hour)	Total Work Load (hour)
Theoretical	3	14	D. Mood: Error Correction Coding, Wiley, 2005.	3.00	42.00
Practicals/Labs		0		0.00	0.00
Self study and preparation	2	14		3.00	42.00
Homeworks		2		32.00	64.00
Projects	R	0		0.00	0.00
Field Studies		0		0.00	0.00
Midterm exams	0	0		16.00	16.00
Others		0		0.00	0.00
Final Exams	1	50		16.00	16.00
Total Work Load					180.00
Contribution of 30 min (Year) Learning Activities to Course Grade			50.00		6.00
ECTS Credit of the Course					6.00
Contribution of Final Exam to Success Grade			50.00		
Total			100.00		

Measurement and Evaluation Techniques Used in the Course	Measurement and evaluation are performed according to the Rules & Regulations of Bursa Uludağ University on Postgraduate Education.
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24	ECTS / WORK LOAD TABLE
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[illegible]

ÖK2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
ÖK5	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
ÖK7	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK8	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK10	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			