VEHICLE COMMUNICATION TECHNOLOGIES

1	Course Title:	VEHICLE COMMUNICATION TECHNOLOGIES	
2	Course Code:	EHAS202	
3	Type of Course:	Optional	
4	Level of Course:	Short Cycle	
5	Year of Study:	2	
6	Semester:	3	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
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:	Öğr. Gör. CAFER KAPLAN	
15	Course Lecturers:	Meslek Yüksekokulları Yönetim Kurullarının görevlendirdiği öğretim elemanları.	
16	Contact information of the Course Coordinator:	Öğr. Gör Cafer KAPLAN Bursa Uludağ Üniversitesi Teknik Bilimler MYO Hibrid ve Elektrikli Taşıtlar Prog. Görükle / Bursa	
17	Website:		
18	Objective of the Course:	Serial communication structure, I2C and SPI communication, especially Can, FlexRay communication, which are widely used in today's vehicles, will be discussed in the course. Communication protocols are exemplified by microcontroller based and it is aimed that students perceive the communication communication structure completely.	
19	Contribution of the Course to Professional Development:	Students who successfully complete this course; • Will be able to master serial communication terminology • Apply SPI, I2C, Can and FlexRay communication protocols with microcontrollers.	
20	Learning Outcomes:		
		1	Will be able to master serial communication terminology
		2	Apply SPI, I2C, Can and FlexRay communication protocols with microcontrollers.
		3	
		4	
		5	
		6	
		7	
		8	
		9	
		10	
21	Course Content:		
	Course Content:		
Week	Theoretical	Practice	

1	Communication network requirements of vehicles	
2	The purpose of use of the communication network in vehicles	
3	Communication network requirements of vehicles	
4	Communication structure of vehicles	
5	Communication network structure of vehicles	
6	Examination of network structures used in vehicles	
7	SPI Communication Structure SPI communication protocol Examples	
8	Midterm Exam	
9	I2C Communication Structure I2C communication protocol I2C Communication Examples	
10	I2C haberleşme uygulamaları	
11	CAN Communication Structure CAN communication protocol	
12	FlexRay Communication Structure	
13	[illegible]	
14	[illegible]	
15	Assesment	
16	Assesment	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	2	14.00	28.00
Homeworks	1	15.00	15.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	15.00	15.00
Others	0	0.00	0.00
Final Exams	1	4.00	4.00
Total Work Load			90.00
Total work load/ 30 hr	0.00		3.00
ECTS Credit of the Course			3.00

Materials: Üniversitesi Yayınları, Yazar : Oğuz Bayat, Volkan Sevindik

Atiquzzaman, PhD

Quiz	0	0.00
Final Exam	1	60.00
Total	3	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		Measurement and evaluation is carried out according to the priciples of Bursa uludag University Associate and Undergraduate Education Regulation.

24	**ECTS / WORK LOAD TABLE**

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	1	3	2	3	3	2	3	4	1	0	0	0	0	0	0	0
ÖK2	3	2	3	3	2	1	1	1	1	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	**1 very low**		**2 low**			**3 Medium**				**4 High**			**5 Very High**			