

KARABÜK ÜNİVERSİTESİ
LİSANSÜSTÜ EĞİTİM ENSTİTÜSÜ

DEPARTMENT OF MECHATRONICS ENGINEERING					
Mechatronics Engineering Thesis PhD Program Course Contents					
COURSE CODE	COURSE NAME AND CONTENTS	T	A	C	ECTS
LUEE801	Scientific Research Techniques and Science Ethics	3	0	3	8
Purpose and Content	Being able to know how the process in a scientific research works and how a scientific report should be prepared. Basic concepts and information about science, structure of scientific research, scientific methods and different views on these methods, problem, research model, universe and sample, collection of data and data collection methods (quantitative and qualitative data collection techniques), recording and analysis of data, interpretation and reporting.				
MKT801	Selected Topics in Mechatronics Engineering	3	0	3	8
Purpose and Content	Developing a mechatronics application on an interdisciplinary subject and demonstrating this with theory and practice. Writing a project, Preparing a project, Preparing a scientific text, Approach methods to engineering problems.				
MKT803	Artificial Neural Networks	3	0	3	8
Purpose and Content	To introduce the basic principles and techniques of ANNs, to examine basic ANN models and to teach their applications. These can be listed as Introduction, Threshold Gates, Computational Ability of ANNs, Learning Rules, Mathematical Theory of Neural Learning, Adaptive Multi-Layer ANN, Adaptive Multi-Layer ANNs, Associative Neural Network Memories, Universal Scanning Methods in ANNs and Self-Organizing Systems.				
MKT807	Advanced Robot Programming	3	0	3	8
Purpose and Content	To teach the selection, coding, simulation and commissioning of the robot to be used in a robotic automation system. Robot selection, Robot programming, Using the robot simulation program, Connecting the robot to PLC, Commissioning the robot.				
MKT812	Optimization for Mechatronic Systems Techniques	3	0	3	8
Purpose and Content	To transfer the necessary optimization technical knowledge and skills in engineering applications to students. Optimization applications and methods in engineering systems. PSO (Particle Swarm Optimization), particle Swarm Optimization, system memory optimization and numerical methods.				

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Kodu: BSEN6EV1BF Belge Doğrulama Adresi : <https://turkiye.gov.tr/ebd?eK=4043&eD=BSEN6EV1BF&eS=295492>



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TezG & TezB	Phd. Thesis Research	-	-	-	26
Purpose and Content					
UzmG& UzmB	Ph.D. Field Of Specialization	-	-	-	4
Purpose and Content					
SeminerG & SeminerB	Ph.D. Seminar	-	-	-	6
Purpose and Content					
YetG & YetB	Phd. Qualification	-	-	-	26
Purpose and Content					

