DEPARTMENT OF MECHATRONICS ENGINEERING

Course Details					
Code			**Academic Year**		**Semester**
MEC092			1		SP
Title			**T**	**A**	**L**	**ECTS**
Scientific Research Methods			2			2

Language	English				
Level	**Undergraduate**	✓	**Graduate**		**Postgraduate**
Department / Program	Mechactronics Engineering				
Forms of Teaching and Learning	Formal				
Course Type	**Compulsory**	✓	**Elective**		
Objectives	Students will be able to carry out scientific analyses and work independently. Moreover, They will be able to write final theses using the methods learned in the field of engineering and to work on a technical problem using scientific methods.				
Content	- Carrying out independent literature searches - Precise writing - Documentation and presentation of facts - Evaluation of scientific correlations.				
Prerequisites	-				
Coordinator	Asst. Prof.Dr.-Ing. Abdulkadir Şanlı				
Lecturer(s)	Asst. Prof.Dr.-Ing. Abdulkadir Şanlı				
Assistant(s)	R.A. Mustafa Hakan Sandık, R.A. Bilge Kağan Dönmez				
Work Placement	-				

Recommended or Required Reading	
Books / Lecture Notes	Script is available in electronic form Citavi Software, Introduction to scientific work with Citavi https://www.citavi.com/service/de/docs/Citavi_5_Wissenschaftliches_Arbeiten.pdf
Other Sources	

Additional Course Material	
Documents	-
Assignments	-
Exams	1 Midterm, 1 Final Exam

Course Composition		
Mathematics und Basic Sciences		20 %
Engineering		40 %
Engineering Design		10 %

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Social Sciences		30 %
Educational Sciences		%
Natural Sciences		%
Health Sciences		%
Expert Knowledge		%

Assessment

Activity	Count	Percentage (%)
Midterm Exam	1	40
Quiz		
Assignments	1	20
Attendance		
Recitations		
Projects		
Final Exam	1	40
Total		**100**

ECTS Points and Work Load

Activity	Count	Duration	Work Load (Hours)
Lectures	15	2	30
Self-Study			
Assignments			
Presentation / Seminar Preparation	1	1	1
Midterm Exam	1	1	1
Recitations			
Laboratory			
Projects			
Final Exam	1	1	1
Total Work Load			**33**
ECTS Points (Total Work Load / Hour)			**2**

Learning Outcomes

1	Acquired knowledge for scientific work
2	Acquired knowledge for writing scientific texts
3	Acquired knowledge for presentation of scientific results
4	
5	
6	

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Weekly Content	
1	Guide to scientific work
2	Literature management and citations
3	References
4	Design of scientific works
5	Preparation of an abstract
6	Outline
7	Table of contents
8	Introduction and motivation
9	*- Midterm Exam-*
10	Analysis of the state of the art
11	Identification of research gaps
12	Concept development
13	Implementation of solution approaches
14	Verification of the results
15	Conclusion and summary

Contribution of Learning Outcomes to Program Objectives (1-5)

	P1	P2	P3	P4	P5	P6	P7
1	5	5	5				
2	5	5	5				
3	5	5	5				
4							
5							
6							
7							
8							
9							
10							

Contribution Level	1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High
https://obs.tau.edu.tr/oibs/bologna/progLearnOutcomes.aspx?lang=en&curSunit=5946	
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