



**ULUDAĞ UNIVERSITY**  
**INSTITUTE OF NATURAL SCIENCES**  
**2015-2016 ACADEMIC YEAR COURSE PLAN**

<b>DEPARTMENT OF</b>	AUTOMOTIVE ENGINEERING
<b>DEPARTMENT / PROGRAM</b>	Automotive Engineering/ Master's Degree Program

	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
COURSE STAGE	OTO5191	MASTER THESIS I	C	0	1	0	0	1	OTO5192	MASTER THESIS II	C	0	1	0	0	1
									OTO5172	SEMINAR (CLASS)	C	0	2	0	0	6
									OTO5102	NUMERICAL ANALYSIS AND OPTIMIZATION METHODS IN AUTOMOTIVE ENGINEERING	C	3	0	0	3	6
	OTO5181	ADVANCED TOPICS IN MASTER THESIS I	E	4	0	0	0	5	OTO5182	ADVANCED TOPICS IN MASTER THESIS II	E	4	0	0	0	5
	OTO5101	AUTOMOTIVE ENGINEERING	E	3	0	0	3	6	OTO5112	VEHICLE DYNAMICS	E	3	0	0	3	6
	OTO5111	VEHICLE DESIGN	E	3	0	0	3	6	OTO5114	ALTERNATIVE PROOULSION SYSTEMS	E	3	0	0	3	6
	OTO5115	AUTOMOTIVE MATERIALS	E	3	0	0	3	6	OTO5120	PRODUCTION AND ASSEMBLY TECHNOLOGIES	E	3	0	0	3	6
	OTO5117	MOTOR VEHICLES AND THEIR EVOLUTION	E	3	0	0	3	6	OTO5124	ENGINE DESIGN AND CONTROL FUNDAMENTALS	E	3	0	0	3	6
	OTO5119	AUTOMOTIVE TRANSMISSION DESIGN	E	3	0	0	3	6	OTO5128	FINITE ELEMENT APPLICATIONS IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	6
	OTO5121	DEVELOPING FORMS AND DESIGNING THE BODY WORK	E	3	0	0	3	6	OTO5130	VEHICLE INTERIOR DESIGN	E	3	0	0	3	6
	OTO5123	ELECTRIC AND ELECTRONIC SYSTEMS FOR VEHICLES	E	3	0	0	3	6	OTO5134	AERODYNAMIC MODELLING FUNDAMENTALS	E	3	0	0	3	6
	OTO5127	INTERNAL COMBUSTION ENGINE DESIGN	E	3	0	0	3	6	OTO5136	ADVANCED TOPICS IN INTERNAL COMBUSTION ENGINES	E	3	0	0	3	6
	OTO5129	MIXTURE FORMATION IN INTERNAL COMBUSTION ENGINES	E	3	0	0	3	6	OTO5138	VEHICLE OUT EMISSIONS AND THEIR CONTROL	E	3	0	0	3	6
	OTO5131	INTERNAL COMBUSTION ENGINES	E	3	0	0	3	6	OTO5140	ADVANCED MANUFACTURING TECHNIQUES FOR VEHICLES	E	3	0	0	3	6
	OTO5133	APPLICATION OF INTERNAL COMBUSTION ENGINES ON VEHICLE	E	3	0	0	3	6	OTO5142	INTERFACE CIRCUITS IN AUTOMOTIVE ELECTRONICS	E	3	0	0	3	6
	OTO5135	VIBRATION AND NOISE IN VEHICLES	E	3	0	0	3	6	OTO5144	EMBEDDED CONTROL SYSTEMS IN VEHICLES	E	3	0	0	3	6
	OTO5137	FUNDAMENTALS OF FINITE ELEMENT ANALYSIS	E	3	0	0	3	6	OTO5146	INTERNAL COMBUSTION ENGINE TESTS	E	3	0	0	3	6
	OTO5139	NUMERICAL MODELING AND SIMULATION	E	3	0	0	3	6	OTO5148	TRIBOLOGICAL SYSTEMS IN AUTOMOTIVE	E	3	0	0	3	6

	OTO5141	VEHICLE HVAC SYSTEMS AND THERMAL COMFORT	E	3	0	0	3	6	OTO5150	FLUID CONTROL SYSTEMS AND APPLICATION IN VEHICLES	E	3	0	0	3	6	
	OTO5143	SENSORS AND ACTUATORS IN VEHICLES	E	3	0	0	3	6									
	OTO5145	ON-BOARD DIAGNOSTIC SYSTEMS IN VEHICLES	E	3	0	0	3	6									
	OTO5147	MODELLING OF ENGINEERING SYSTEMS IN AUTOMOTIVE	E	3	0	0	3	6									
	OTO5149	USE OF POLYMERS IN VEHICLES	E	3	0	0	3	6									
	OTO5151	VEHICLE DISCRETE-TIME CONTROL SYSTEMS	E	3	0	0	3	6									
	Total Credits							12	30	Total Credits							9
STAGE THESIS	III. TERM / FALL								IV. TERM / SPRING								
	OTO5183	ADVANCED TOPICS IN MASTER THESIS III	C	4	0	0	0	5	OTO5184	ADVANCED TOPICS IN MASTER THESIS IV	C	4	0	0	0	5	
	OTO5173	SEMINAR (THESIS)	C	0	2	0	0	5	OTO5194	MASTER THESIS IV	C	0	1	0	0	25	
	OTO5193	MASTER THESIS III	C	0	1	0	0	20									
	Total Credits							0	30	Total Credits							0
TOTAL CREDITS: 21 - TOTAL ECTS: 120																	

**Not:**Thestudent have the option of choosing one selective course from another department with the endorsement of the supervisor.



**ULUDAĞ UNIVERSITY**  
**INSTITUTE OF NATURAL SCIENCES**  
**2015-2016 ACADEMIC YEAR COURSE PLAN**

<b>DEPARTMENT OF</b>	AUTOMOTIVE ENGINEERING
<b>DEPARTMENT / PROGRAM</b>	Automotive Engineering/ Master's Degree Program (Secondary Education)

	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
COURSE STAGE	OTO5191	MASTER THESIS I	C	0	1	0	0	1	OTO5192	MASTER THESIS II	C	0	1	0	0	1
									OTO5172	SEMINAR (CLASS)	C	0	2	0	0	6
									OTO5102	NUMERICAL ANALYSIS AND OPTIMIZATION METHODS IN AUTOMOTIVE ENGINEERING	C	3	0	0	3	6
	OTO5181	ADVANCED TOPICS IN MASTER THESIS I	E	4	0	0	0	5	OTO5182	ADVANCED TOPICS IN MASTER THESIS II	E	4	0	0	0	5
	OTO5101	AUTOMOTIVE ENGINEERING	E	3	0	0	3	6	OTO5112	VEHICLE DYNAMICS	E	3	0	0	3	6
	OTO5111	VEHICLE DESIGN	E	3	0	0	3	6	OTO5114	ALTERNATIVE PROOULSION SYSTEMS	E	3	0	0	3	6
	OTO5115	AUTOMOTIVE MATERIALS	E	3	0	0	3	6	OTO5120	PRODUCTION AND ASSEMBLY TECHNOLOGIES	E	3	0	0	3	6
	OTO5117	MOTOR VEHICLES AND THEIR EVOLUTION	E	3	0	0	3	6	OTO5124	ENGINE DESIGN AND CONTROL FUNDAMENTALS	E	3	0	0	3	6
	OTO5119	AUTOMOTIVE TRANSMISSION DESIGN	E	3	0	0	3	6	OTO5128	FINITE ELEMENT APPLICATIONS IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	6
	OTO5121	DEVELOPING FORMS AND DESIGNING THE BODY WORK	E	3	0	0	3	6	OTO5130	VEHICLE INTERIOR DESIGN	E	3	0	0	3	6
	OTO5123	ELECTRIC AND ELECTRONIC SYSTEMS FOR VEHICLES	E	3	0	0	3	6	OTO5134	AERODYNAMIC MODELLING FUNDAMENTALS	E	3	0	0	3	6
	OTO5127	INTERNAL COMBUSTION ENGINE DESIGN	E	3	0	0	3	6	OTO5136	ADVANCED TOPICS IN INTERNAL COMBUSTION ENGINES	E	3	0	0	3	6
	OTO5129	MIXTURE FORMATION IN INTERNAL COMBUSTION ENGINES	E	3	0	0	3	6	OTO5138	VEHICLE OUT EMISSIONS AND THEIR CONTROL	E	3	0	0	3	6
	OTO5131	INTERNAL COMBUSTION ENGINES	E	3	0	0	3	6	OTO5140	ADVANCED MANUFACTURING TECHNIQUES FOR VEHICLES	E	3	0	0	3	6
	OTO5133	APPLICATION OF INTERNAL COMBUSTION ENGINES ON VEHICLE	E	3	0	0	3	6	OTO5142	INTERFACE CIRCUITS IN AUTOMOTIVE ELECTRONICS	E	3	0	0	3	6
	OTO5135	VIBRATION AND NOISE IN VEHICLES	E	3	0	0	3	6	OTO5144	EMBEDDED CONTROL SYSTEMS IN VEHICLES	E	3	0	0	3	6
	OTO5137	FUNDAMENTALS OF FINITE ELEMENT ANALYSIS	E	3	0	0	3	6	OTO5146	INTERNAL COMBUSTION ENGINE TESTS	E	3	0	0	3	6
	OTO5139	NUMERICAL MODELING AND SIMULATION	E	3	0	0	3	6	OTO5148	TRIBOLOGICAL SYSTEMS IN AUTOMOTIVE	E	3	0	0	3	6
	OTO5141	VEHICLE HVAC SYSTEMS AND THERMAL COMFORT	E	3	0	0	3	6	OTO5150	FLUID CONTROL SYSTEMS AND APPLICATION IN VEHICLES	E	3	0	0	3	6

	OTO5143	SENSORS AND ACTUATORS IN VEHICLES	E	3	0	0	3	6												
	OTO5145	ON-BOARD DIAGNOSTIC SYSTEMS IN VEHICLES	E	3	0	0	3	6												
	OTO5147	MODELLING OF ENGINEERING SYSTEMS IN AUTOMOTIVE	E	3	0	0	3	6												
	OTO5149	USE OF POLYMERS IN VEHICLES	E	3	0	0	3	6												
	OTO5151	VEHICLE DISCRETE-TIME CONTROL SYSTEMS	E	3	0	0	3	6												
	Total Credits								12	30	Total Credits								9	30
	STAGE THESIS	III. TERM / FALL								IV. TERM / SPRING										
OTO5183		ADVANCED TOPICS IN MASTER THESIS III	C	4	0	0	0	5	OTO5184	ADVANCED TOPICS IN MASTER THESIS IV	C	4	0	0	0	5				
OTO5173		SEMINAR (THESIS)	C	0	2	0	0	5	OTO5194	MASTER THESIS IV	C	0	1	0	0	25				
OTO5193		MASTER THESIS III	C	0	1	0	0	20												
Total Credits								0	30	Total Credits								0	30	
TOTAL CREDITS: 21 - TOTAL ECTS: 120																				

**Not:**Thestudent have the option of choosing one selective course from another department with the endorsement of the supervisor.



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**INSTITUTE OF NATURAL SCIENCES**  
**2015-2016 ACADEMIC YEAR COURSE PLAN**

DEPARTMENT OF		AUTOMOTIVE ENGINEERING																
DEPARTMENT / PROGRAM		Automotive Engineering / Doctoral Program																
COURSE STAGE	I. TERM / FALL								II. TERM / SPRING									
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS		
	OTO6191	PHD THESIS I	C	0	1	0	0	1	OTO6192	PHD THESIS II	C	0	1	0	0	1		
	FEN6001	RESEARCH METHODS	C	2	0	0	2	4	OTO6172	SEMINAR (CLASS)	C	0	2	0	0	4		
	OTO6101	AUTOMOTIVE DESIGN, MANUFACTURING AND PROJECT MANAGEMENT	C	3	0	0	3	5										
	OTO6181	ADVANCED TOPICS IN PHD THESIS I	E	4	0	0	0	5	OTO6182	ADVANCED TOPICS IN PHD THESIS II	E	4	0	0	0	5		
	OTO6111	VEHICLE CRASH ANALYSIS METHODS	E	3	0	0	3	5	OTO6112	CONTROL SYSTEMS IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	5		
	OTO6113	THE USAGE OF ADVANCED MATERIALS IN VEHICLES	E	3	0	0	3	5	OTO6114	VEHICLE BRAKING SYSTEMS	E	3	0	0	3	5		
	OTO6115	COMPUTATIONAL FLUID DYNAMICS METHODS OF VEHICLES	E	3	0	0	3	5	OTO6116	SPECIAL TOPICS IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	5		
	OTO6117	MECHATRONICS IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	5	OTO6118	EMISSION CONTROL AND MONITORING	E	3	0	0	3	5		
	OTO6119	ADVANCED LEVEL PROGRAMMING IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	5	OTO6120	AUTOMOTIVE COMPOSITES AND SANDWICH STRUCTURES	E	3	0	0	3	5		
									OTO6122	FUELL CELLS	E	3	0	0	3	5		
									OTO6124	DESIGNING OF ELECTRONIC CONTROL UNITS FOR VEHICLES	S	3	0	0	3	5		
									OTO6126	DAMAGE ANALYSIS OF VEHICLES	S	3	0	0	3	5		
	Total Credits							14	30	Total Credits							12	30
STAGE THESIS	III. TERM / FALL								IV. TERM / SPRING									
	YET6177	PHD PROFICIENCY EXAMINATION	C	0	0	0	0	10	OTO6184	ADVANCED TOPICS IN PHD THESIS IV	C	4	0	0	0	5		
	OTO6171	SEMINAR (THESIS)	C	0	2	0	0	5	OTO6194	PHD THESIS IV	C	0	1	0	0	25		
	OTO6183	ADVANCED TOPICS IN PHD THESIS III	C	4	0	0	0	5										
	OTO6193	PHD THESIS III	C	0	1	0	0	10										
	Total Credits							0	30	Total Credits							0	30
	V. TERM / FALL								VI. TERM / SPRING									
	ENS6121	DEVELOPMENT AND LEARNING*	C	3	0	0	3	5	ENS6122	PLANNING AND EVALUATION IN EDUCATION*	C	3	2	0	0	5		
	OTO6185	ADVANCED TOPICS IN PHD THESIS V	C	4	0	0	0	5	OTO6186	ADVANCED TOPICS IN PHD THESIS VI	C	4	0	0	0	5		
	OTO6195	PHD THESIS V	C	0	1	0	0	20	OTO6196	PHD THESIS VI	C	0	1	0	0	20		
	Total Credits							0	30	Total Credits							0	30
	VII. TERM / FALL								VIII. TERM / SPRING									
	OTO6187	ADVANCED TOPICS IN PHD THESIS	C	4	0	0	0	5	OTO6188	ADVANCED TOPICS IN PHD THESIS VIII	C	4	0	0	0	5		

VII																	
OTO6197	PHD THESIS VII	C	0	1	0	0	25	OTO6198	PHD THESIS VIII	C	0	1	0	0	25		
Total Credits							0	30	Total Credits							0	30
TOTAL CREDITS: 26 - TOTAL ECTS: 240																	



**U LUDAĞ UNIVERSITY**  
**INSTITUTE OF NATURAL SCIENCES**  
**2015-2016 ACADEMIC YEAR COURSE PLAN**

<b>DEPARTMENT OF</b>	<b>AUTOMOTIVE ENGINEERING</b>
<b>DEPARTMENT / PROGRAM</b>	<b>Automotive Engineering / Integrated Doctoral Program</b>

COURSE STAGE	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
	OTO6191	PHD THESIS I	C	0	1	0	0	1	OTO6192	PHD THESIS II	C	0	1	0	0	1
	OTO6181	ADVANCED TOPICS IN PHD THESIS I	E	4	0	0	0	5	OTO6182	ADVANCED TOPICS IN PHD THESIS II	E	4	0	0	0	5
									OTO5102	NUMERICAL ANALYSIS AND OPTIMIZATION METHODS IN AUTOMOTIVE ENGINEERING	C	3	0	0	3	6
		ELECTIVE COURSE	E	3	0	0	3	6		ELECTIVE COURSE	E	3	0	0	3	6
		ELECTIVE COURSE	E	3	0	0	3	6		ELECTIVE COURSE	E	3	0	0	3	6
		ELECTIVE COURSE	E	3	0	0	3	6		ELECTIVE COURSE	E	3	0	0	3	6
		ELECTIVE COURSE	E	3	0	0	3	6								
	<b>Total Credits</b>						<b>12</b>	<b>30</b>	<b>Total Credits</b>						<b>12</b>	<b>30</b>
	III. TERM / FALL								IV. TERM / SPRING							
	OTO6193	PHD THESIS III	C	0	1	0	0	1	OTO6194	PHD THESIS IV	C	0	1	0	0	1
	FEN6001	RESEARCH METHODS	C	2	0	0	2	4	OTO6172	SEMINAR (CLASS)	C	0	2	0	0	4
	OTO6183	ADVANCED TOPICS IN PHD THESIS III	C	4	0	0	0	5	OTO6184	ADVANCED TOPICS IN PHD THESIS IV	C	4	0	0	0	5
	OTO6101	AUTOMOTIVE DESIGN, MANUFACTURING AND PROJECT MANAGEMENT	C	3	0	0	3	5								
		ELECTIVE COURSE	E	3	0	0	3	5		ELECTIVE COURSE	E	3	0	0	3	5
		ELECTIVE COURSE	E	3	0	0	3	5		ELECTIVE COURSE	E	3	0	0	3	5
		ELECTIVE COURSE	E	3	0	0	3	5		ELECTIVE COURSE	E	3	0	0	3	5
										ELECTIVE COURSE	E	3	0	0	3	5
	<b>Total Credits</b>						<b>14</b>	<b>30</b>	<b>Total Credits</b>						<b>12</b>	<b>30</b>
STAGE THESIS	V. TERM / FALL								VI. YARIYIL / BAHAR							
	YET6177	PHD PROFICIENCY EXAMINATION	C	0	0	0	0	10	OTO6186	ADVANCED TOPICS IN PHD THESIS VI	C	4	0	0	0	5
	OTO6171	SEMINAR (THESIS)	C	2	0	0	0	5	OTO6196	PHD THESIS VI	C	0	1	0	0	25
	OTO6185	ADVANCED TOPICS IN PHD THESIS V	C	4	0	0	0	5								
	OTO6195	PHD THESIS V	C	0	1	0	0	10								
	<b>Total Credits</b>						<b>0</b>	<b>30</b>	<b>Total Credits</b>						<b>0</b>	<b>30</b>
	VII. TERM / FALL								VIII. TERM / SPRING							
	ENS6121	DEVELOPMENT AND LEARNING	C	3	0	0	0	5	ENS6122	PLANNING AND EVALUATION IN EDUCATION	C	3	2	0	0	5
	OTO6187	ADVANCED TOPICS IN PHD THESIS VII	C	4	0	0	0	5	OTO6188	ADVANCED TOPICS IN PHD THESIS VIII	C	4	0	0	0	5
	OTO6197	PHD THESIS VII	C	0	1	0	0	20	OTO6198	PHD THESIS VIII	C	0	1	0	0	20
	<b>Total Credits</b>						<b>0</b>	<b>30</b>	<b>Total Credits</b>						<b>0</b>	<b>30</b>
	IX. TERM / FALL								X. TERM / SPRING							
	OTO6189	ADVANCED TOPICS IN PHD THESIS IX	C	4	0	0	0	5	OTO6190	ADVANCED TOPICS IN PHD THESIS X	C	4	0	0	0	5
	OTO6199	PHD THESIS IX	C	0	1	0	0	25	OTO6290	PHD THESIS X	C	0	1	0	0	25
	<b>Total Credits</b>						<b>0</b>	<b>30</b>	<b>Total Credits</b>						<b>0</b>	<b>30</b>

**TOTAL CREDITS:50 -TOTAL ECTS: 300**

COURSE STAGE	I. TERM / ELECTIVE COURSES								II. TERM / ELECTIVE COURSES							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
	OTO5101	AUTOMOTIVE ENGINEERING	E	3	0	0	3	6	OTO5112	VEHICLE DYNAMICS	E	3	0	0	3	6
	OTO5111	VEHICLE DESIGN	E	3	0	0	3	6	OTO5114	ALTERNATIVE PROOULSION SYSTEMS	E	3	0	0	3	6
	OTO5115	AUTOMOTIVE MATERIALS	E	3	0	0	3	6	OTO5120	PRODUCTION AND ASSEMBLY TECHNOLOGIES	E	3	0	0	3	6
	OTO5117	MOTOR VEHICLES AND THEIR EVOLUTION	E	3	0	0	3	6	OTO5124	ENGINE DESIGN AND CONTROL FUNDAMENTALS	E	3	0	0	3	6
	OTO5119	AUTOMOTIVE TRANSMISSION DESIGN	E	3	0	0	3	6	OTO5128	FINITE ELEMENT APPLICATIONS IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	6
	OTO5121	DEVELOPING FORMS AND DESIGNING THE BODY WORK	E	3	0	0	3	6	OTO5130	VEHICLE INTERIOR DESIGN	E	3	0	0	3	6
	OTO5123	ELECTRIC AND ELECTRONIC SYSTEMS FOR VEHICLES	E	3	0	0	3	6	OTO5134	AERODYNAMIC MODELLING FUNDAMENTALS	E	3	0	0	3	6
	OTO5127	INTERNAL COMBUSTION ENGINE DESIGN	E	3	0	0	3	6	OTO5136	ADVANCED TOPICS IN INTERNAL COMBUSTION ENGINES	E	3	0	0	3	6
	OTO5129	MIXTURE FORMATION IN INTERNAL COMBUSTION ENGINES	E	3	0	0	3	6	OTO5138	VEHICLE OUT EMISSIONS AND THEIR CONTROL	E	3	0	0	3	6
	OTO5131	INTERNAL COMBUSTION ENGINES	E	3	0	0	3	6	OTO5140	ADVANCED MANUFACTURING TECHNIQUES FOR VEHICLES	E	3	0	0	3	6
	OTO5133	APPLICATION OF INTERNAL COMBUSTION ENGINES ON VEHICLE	E	3	0	0	3	6	OTO5142	INTERFACE CIRCUITS IN AUTOMOTIVE ELECTRONICS	S	3	0	0	3	6
	OTO5135	VIBRATION AND NOISE IN VEHICLES	E	3	0	0	3	6	OTO5144	EMBEDDED CONTROL SYSTEMS IN VEHICLES	S	3	0	0	3	6
	OTO5137	FUNDAMENTALS OF FINITE ELEMENT ANALYSIS	E	3	0	0	3	6	OTO5146	INTERNAL COMBUSTION ENGINE TESTS	S	3	0	0	3	6
	OTO5139	NUMERICAL MODELING AND SIMULATION	E	3	0	0	3	6	OTO5148	TRIBOLOGICAL SYSTEMS IN AUTOMOTIVE	S	3	0	0	3	6
	OTO5141	VEHICLE HVAC SYSTEMS AND THERMAL COMFORT	E	3	0	0	3	6	OTO5150	FLUID CONTROL SYSTEMS AND APPLICATION IN VEHICLES	S	3	0	0	3	6
	OTO5143	SENSORS AND ACTUATORS IN VEHICLES	E	3	0	0	3	6	OTO6114	VEHICLE BRAKING SYSTEMS	E	3	0	0	3	6
	OTO5145	ON-BOARD DIAGNOSTIC SYSTEMS IN VEHICLES	E	3	0	0	3	6	OTO6122	FUELL CELLS	E	3	0	0	3	6
	OTO5147	MODELLING OF ENGINEERING SYSTEMS IN AUTOMOTIVE	E	3	0	0	3	6								
	OTO5149	USE OF POLYMERS IN VEHICLES	E	3	0	0	3	6								



	OTO5151	VEHICLE DISCRETE-TIME CONTROL SYSTEMS	E	3	0	0	3	6								
COURSE STAGE	III. TERM / ELECTIVE COURSES								IV. TERM / ELECTIVE COURSES							
	OTO6111	VEHICLE CRASH ANALYSIS METHODS	E	3	0	0	3	5	OTO6112	CONTROL SYSTEMS IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	5
	OTO6113	THE USAGE OF ADVANCED MATERIALS IN VEHICLES	E	3	0	0	3	5	OTO6116	SPECIAL TOPICS IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	5
	OTO6115	COMPUTATIONAL FLUID DYNAMICS METHODS OF VEHICLES	E	3	0	0	3	5	OTO6118	EMISSION CONTROL AND MONITORING	E	3	0	0	3	5
	OTO6117	MECHATRONICS IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	5	OTO6120	AUTOMOTIVE COMPOSITES AND SANDWICH STRUCTURES	E	3	0	0	3	5
	OTO6119	ADVANCED LEVEL PROGRAMMING IN AUTOMOTIVE ENGINEERING	E	3	0	0	3	5	OTO6124	DESIGNING OF ELECTRONIC CONTROL UNITS FOR VEHICLES	S	3	0	0	3	5
								OTO6126	DAMAGE ANALYSIS OF VEHICLES	S	3	0	0	3	5	



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**2015-2016 ACADEMIC YEAR COURSE PLAN**

<b>DEPARTMENT OF</b>	AUTOMOTIVE ENGINEERING
<b>DEPARTMENT / PROGRAM</b>	Automotive Engineering/ Master's Degree Program (Without Thesis)

COURSE STAGE	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
	OTO5001	VEHICLE DESIGN	C	3	0	0	3	7.5	OTO5002	VEHICLE DYNAMICS	C	3	0	0	3	7.5
	OTO5003	MOTOR VEHICLES AND THEIR EVOLUTION	C	3	0	0	3	7.5	OTO5004	NUMERICAL MODELING AND SIMULATION	C	3	0	0	3	7.5
	OTO5005	AUTOMOTIVE TRANSMISSION DESIGN	C	3	0	0	3	7.5	OTO5008	COMBUSTION ENGINE APPLICATION TO VEHICLE	C	3	0	0	3	7.5
	OTO5007	PRODUCTION AND ASSEMBLY TECHNOLOGIES	C	3	0	0	3	7.5								
									OTO5010	FLUID POWER SYSTEMS FOR VEHICLES	E	3	0	0	3	7.5
	<b>Total Credits</b>						<b>12</b>	<b>30</b>	<b>Total Credits</b>						<b>12</b>	<b>30</b>
	III. TERM / FALL								IV. TERM / SPRING							
	OTO5009	DEVELOPING FORMS AND DESIGNING THE BODY WORK	C	3	0	0	3	7.5	OTO5000	PROJECT	C	0	1	0		25
	OTO5011	ELECTRIC AND ELECTRONIC SYSTEMS FOR VEHICLES	C	3	0	0	3	7.5	OTO5100	SEMINAR	C	0	0	0		5
	OTO5031	INTERNAL COMBUSTION ENGINES	E	3	0	0	3	7.5								
	OTO5033	INTERIORS DESIGN	E	3	0	0	3	7.5								
	OTO5035	EMISSION CONTROL AND TECHN. EVOLUTION OF ENGINE	E	3	0	0	3	7.5								
	OTO5037	ALTERNATIVE PROPULSION SYSTEMS	E	3	0	0	3	7.5								
	OTO5039	TRANSPORT SYSTEMS AND TRAFFIC ENGINEERING	E	3	0	0	3	7.5								
	OTO5043	RUBBER AND TIRE TECHNOLOGY	E	3	0	0	3	7.5								
	OTO5045	INFORMATION SYSTEMS FOR VEHICLES	E	3	0	0	3	7.5								
	OTO5047	AUTOMOTIVE MATERIALS	E	3	0	0	3	7.5								
	<b>Total Credits</b>						<b>12</b>	<b>30</b>	<b>Total Credits</b>						<b>0</b>	<b>30</b>

**TOTAL CREDITS:36 -TOTAL ECTS: 120**