MECHATRONICS ENGINEERING DEPARTMENT BACHELOR'S SCIENCE CURRICULUM (2016/17)

FRESHMAN YEAR

1. Semester

Course Code	Course Title	T	R	C	ECTS
CENG 161	Introduction to Computer Science + Lab.	3	2	4	5
ENG 121	Academic English I	2	2	3	4
MATH 155	Calculus for Engineering I	3	2	4	5
PHYS 131	Physics I	3	2	4	6
TURK 101	Turkish I	2	0	2	3
MECE 101	Computational Tools for Mechatronics Engineering	1	0	1	1
MECE 113	Computer Aided Engineering Drawing I	2	2	3	6
Total 7 courses		16	10	21	30

2. Semester

Course Code	Course Title	T	R	C	ECTS
MECE 114	Computer Aided Engineering Drawing II	2	2	3	4
CENG 162	Computer Programming I + Lab.	3	2	4	5
ENG 122	Academic English II	2	2	3	4
MATH 156	Calculus for Engineering II	3	2	4	5
PHYS 132	Physics II	3	2	4	6
TURK 102	Turkish II	2	0	2	3
MECE 104	Fundamentals of Mechatronics Engineering	2	0	2	2
ESR 101	Ethics and Social Responsibility	1	0	1	1
Total 8 courses		18	10	23	30

Rev. date: September, 2016.

SOPHMORE YEAR

3. Semester

Course Code	Course Title	T	R	C	ECTS
MECE 203	Statics	3	0	3	6
MECE 210	Manufacturing Processes	3	2	4	5
MECE 311	Probability and Random Processes	3	0	3	4
MECE 233	Electrical Circuit Analysis + Lab.	3	2	4	4
MECE 223	Digital Design I + Lab.	3	2	4	4
MATH 258	Introduction to Differential Equation	2	2	3	4
ENG 221	Advanced Writing Skills	2	0	2	3
Total 7 courses		19	8	23	30

4. Semester

Course Code	Course Title	T	R	C	ECTS
MECE 206	Dynamics	3	0	3	4
MECE 246	Fundamentals of Electronics + Lab.	3	2	4	5
ENG 222	Academic Presentation Skills	2	0	2	3
MECE 202	Strength of Materials	3	0	3	5
MECE 232	Advanced Electrical Circuit Analysis + Lab.	3	2	4	4
MATH 255	Vector Calculus and Linear Algebra	2	2	3	4
MECE 218	Principles of Signals and Systems + Lab.	3	2	4	5
Total 7 courses		19	8	23	30

JUNIOR YEAR

5. Semester

Course Code	Course Title	T	R	C	ECTS
MECE 307	Machine Elements I	3	0	3	5
Elective	Social Science Elective I	3	0	3	3
MSE 235	Materials Science for Electronics	3	0	3	4
MECE 347	Electronics + Lab.	3	2	4	6
MECE 301	Theory of Machines I	3	0	3	4
Elective	Social Science Elective II	3	0	3	3
MECE 200	Summer Training I	0	0	0	5
Total 7 courses		18	2	19	30

6. Semester

Course Code	Course Title	T	R	C	ECTS
MECE 388	Automatic Control System + Lab.	2	2	3	5
MECE 215	Fundamentals of Thermal Systems	3	0	3	4
MECE 308	Mechatronics System Design I	3	0	3	5
MECE 302	Sensors and Measurement	3	2	4	7
MECE 336	Microprocessors I + Lab.	3	2	4	5
MECE 240	Electromechanical Energy Conversion	3	0	3	4
Total 6 courses		17	6	20	30

SENIOR YEAR

7. Semester

Course Code	Course Title	T	R	C	ECTS
IE 345	Engineering Economy	3	0	3	4
MECE 309	Mechatronics System Design II	3	0	3	5
Elective	Technical Elective I*	3	0	3	5
MECE 401	Introduction to Robotics	3	2	4	5
MECE 407	Innovative Engineering Analysis and Design	1	2	2	3
HIST 201	Principles of Kemal Atatürk	2	0	2	3
MECE 300	Summer Training II	0	0	0	5
Total 7 courses		15	4	17	30

8. Semester

Course Code	Course Title	T	R	C	ECTS
HIST 202	Principles of Kemal Atatürk II	2	0	2	3
Elective	Technical Elective II*	3	0	3	5
Elective	Technical Elective III*	3	0	3	5
Elective	Technical Elective IV*	3	0	3	5
Elective	Technical Elective V*	3	0	3	5
IE 446	Project Engineering Management	3	0	3	4
MECE 408	Innovative Engineering Design and Implementation	1	2	2	3
Total 7 courses		18	2	19	30

	TOTAL CREDIT	**140**	**50**	**165**	**240**

* In Technical Elective courses, in addition to Mechatronics Engineering (MECE) courses, there are also some must and elective courses of Mechanical Engineering (ME), Electronics and Communication Engineering (ECE), Computer Engineering (CENG), Electrical and Electronics Engineering (EE), Materials Science and Engineering (MSE) and Industrial Engineering (IE). But at least 3 of the 5 Technical Elective courses must be taken from Mechatronics Engineering (MECE) or Mechanical Engineering (ME) or Electronics and Communication Engineering (ECE) or Electrical and Electronics Engineering Departments subjected to approval of the department.

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