

**FACULTY OF ENGINEERING, DEPARTMENT OF METALLURGY AND MATERIALS ENGINEERING**

**2012-2013 ACADEMIC CURRICULUM, CODE OF PROGRAMME: 0229, (100% English), (I. EDUCATION)**

**2012-2013 ACADEMIC CURRICULUM, CODE OF PROGRAMME: 0230, (100% English), (II. EDUCATION)**

Prep Class 1st. Semester					Prep Class 2nd. Semester						
Code	Course Name	LT	LB	CR	ECTS	Code	Course Name	LT	LB	CR	ECTS
MME000	Prep Class	0	0	0	0	MME000	Prep Class	0	0	0	0

1st. Semester Courses					2nd. Semester Courses						
Code	Course Name	LT	LB	CR	ECTS	Code	Course Name	LT	LB	CR	ECTS
CAL183	Mathematics I	4	0	4	4	CAL186	Mathematics II	4	0	4	4
PHY183	General Physics I	4	0	4	4	PHY186	General Physics II	4	0	4	4
CHE183	General Chemistry	3	0	3	3	CHE186	Psychochemistry	3	0	3	3
CME183	Information Technologies and Applications	2	2	3	4	CME182	Computer Programming	2	2	3	4
MME103	Technical Drawing	2	2	3	5	MME104	Computer Aided Technical Drawing	2	2	3	5
MME101	Introduction to Metallurgical and Materials Engineering	2	0	2	4	MME102	Structure of Materials	2	0	2	4
<b>Total</b>		<b>17</b>	<b>4</b>	<b>19</b>	<b>30</b>	<b>Total</b>		<b>17</b>	<b>4</b>	<b>19</b>	<b>30</b>
HST181	Atatürk's Principles and History of Revolutions I	2	0	2	2	HST182	Atatürk's Principles and History of Revolutions II	2	0	2	2
TRK181	Turkish Language I	2	0	2	2	TRK182	Turkish Language II	2	0	2	2
FOL181	Foreign Language I	2	0	2	2	FOL182	Foreign Language II	2	0	2	2

3rd. Semester Courses					4th. Semester Courses						
Code	Course Name	LT	LB	CR	ECTS	Code	Course Name	LT	LB	CR	ECTS
FOL281	Technical Foreign Language I	2	0	2	2	FOL282	Technical Foreign Language II	2	0	2	2
CAL283	Differential Equations	3	0	3	4	INE260	Engineering Statistics	2	0	2	4
MME201	Metallurgical Thermodynamics I	3	0	3	5	MME202	Metallurgical Thermodynamics II	3	0	3	5
MME203	Materials Science I	3	0	3	5	MME208	Materials Science II	3	0	3	5
MME211	Metallography	2	2	3	4	<b>MME214</b>	<b>Transport Phenomena</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4</b>
<b>MME213</b>	<b>Extractive Metallurgy</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>5</b>	MME216	Heat Treatment and Laboratories	2	2	3	5
MCE259	Statics and Strengths	3	0	3	5	MME206	Phase Diagrams	3	0	3	5
<b>Total</b>		<b>19</b>	<b>2</b>	<b>20</b>	<b>30</b>	<b>Total</b>		<b>18</b>	<b>2</b>	<b>19</b>	<b>30</b>

5th. Semester Courses					6th. Semester Courses						
Code	Course Name	LT	LB	CR	ECTS	Code	Course Name	LT	LB	CR	ECTS
MME399	Industrial Practice I <sup>1</sup>	0	0	0	4	MME302	Nonferrous Metal Production	3	0	3	3
MME321	Material Laboratory	3	4	5	5	MME304	Extractive Metallurgy Laboratory	3	4	5	6
MME303	Casting Principles	3	0	3	3	MME306	Casting Technology	2	2	3	4
MME307	Phase Transformation of Materials	3	0	3	4	MME308	Computer Aided Design	3	0	3	4
	<b>Technical Elective Course<sup>2</sup></b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4</b>	INE360	Engineering Economy	2	0	2	3
	<b>Technical Elective Course<sup>2</sup></b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4</b>		<b>Technical Elective Course<sup>2</sup></b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4</b>
	<b>Technical Elective Course<sup>2</sup></b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4</b>		<b>Technical Elective Course<sup>2</sup></b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4</b>
	<b>Social Elective Course<sup>3</sup></b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>2</b>		<b>Social Elective Course<sup>3</sup></b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>2</b>
<b>Total</b>		<b>20</b>	<b>4</b>	<b>22</b>	<b>30</b>	<b>Total</b>		<b>21</b>	<b>6</b>	<b>24</b>	<b>30</b>

**Technical Elective Courses**

MME305	Iron-Steel Production	3	0	3	4
MME309	Polymer Materials	3	0	3	4
MME313	Cement and Concrete	3	0	3	4
MME311	Mechanical Metallurgy	3	0	3	4

**Social Elective Courses**

MSD301	Labour Law	2	0	2	2
MSD303	Patent and Industrial Design	2	0	2	2
MSD305	Entrepreneurship	2	0	2	2
MSD307	Communication Skills	2	0	2	2
MSD309	International Communication	2	0	2	2
MSD311	Critical Analytic Thinking Techniques	2	0	2	2

<sup>1</sup> "Industrial Practice I" will be done according to the training regulation.

<sup>2</sup> The course will be selected in each semester from Technical Elective Courses

<sup>3</sup> One course will be selected in each semester from Social Elective Courses

7th. Semester					8th. Semester						
Code	Course Name	LT	LB	CR	ECTS	Code	Course Name	LT	LB	CR	ECTS
MME499	Industrial Practice II	0	0	0	4	MME400	Graduation Thesis	0	2	1	2

MME401	Material Forming Methods	3	0	3	3
MME403	Metallurgical and Materials Design Project	0	2	1	2
MME405	Quality Control and Quality Systems	3	0	3	3
	<b>Branch Elective Course<sup>1</sup></b>	3	0	3	6
	<b>Branch Elective Course<sup>1</sup></b>	3	0	3	6
	<b>Branch Elective Course<sup>1</sup></b>	3	0	3	6
<b>Total</b>		<b>15</b>	<b>2</b>	<b>16</b>	<b>30</b>

ENG402	Engineering Ethics	2	0	2	2
MME404	Corrosion and Protection Methods	3	0	3	4
MME406	Material Characterization	3	0	3	4
	<b>Branch Elective Course<sup>1</sup></b>	3	0	3	6
	<b>Branch Elective Course<sup>1</sup></b>	3	0	3	6
	<b>Branch Elective Course<sup>1</sup></b>	3	0	3	6
<b>Total</b>		<b>17</b>	<b>2</b>	<b>18</b>	<b>30</b>

<b>Branch Elective Course (Material)</b>					
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MME407	Nondestructive Testing Methods	3	0	3	6
MME409	Nanomaterials	3	0	3	6
MME411	Solidification	3	0	3	6
MME413	Alternative Iron-Steel Production Methods	3	0	3	6
MME415	Cast Irons	3	0	3	6
MME417	Amorphous Materials	3	0	3	6

<b>Branch Elective Course (Material)</b>					
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MME408	Special Steels	3	0	3	6
MME410	Thin Film Technologies	3	0	3	6
MME412	Physical Properties of Materials	3	0	3	6
MME414	Rolling and Calibration	3	0	3	6
MME416	Powder Metallurgy	3	0	3	6
MME420	Material Selection and Failure Analyses	3	0	3	6

<b>Branch Elective Course (Extractive Metallurgy)</b>					
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MME419	Hydrometallurgy	3	0	3	6
MME421	Pyrometallurgy	3	0	3	6
MME423	Electrometallurgy	3	0	3	6
MME425	Glass Technology	3	0	3	6
MME427	Welding Metallurgy	3	0	3	6

<b>Branch Elective Course (Extractive Metallurgy)</b>					
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MME422	Welding Technology	3	0	3	6
MME424	Metallurgical Scrap and Recycling	3	0	3	6
MME426	Refractory Materials and Industrial Furnaces	3	0	3	6
MME428	Ceramic Processes	3	0	3	6
MME416	Powder Metallurgy	3	0	3	6

<sup>1</sup> At least 4 courses should be selected from the same Branch in the full year term  
 "Industrial Practice" will be done according to the training regulation.

<b>COURSE STATISTICS</b>					
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1	Total National Credits	157	6	Total Credits/ 128 Boundary Credits	%122,66
2	Total ECTS Credits	240	7	Total ECTS Credits / Total National Credits	%152,87
3	Total Credit of Elective Courses	34	8	Total Credit of Elective Courses / Total National Credits	%21,66
4	Total Time of Theoretical Courses	144	9	Total Time of Theoretical Courses / Total Time Courses	%84,71
5	Total Time of Practical Courses	26	10	Total Time of Practical Courses / Total Time Courses	%15,29

<b>SYSTEM INFORMATION</b>	
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