General Curriculum

- Department of Materials Science and Engineering

Module Code	Module Name	Category	Lectures hrs/	Lab/ Assignments	Credits		Norm			uation %)	
			week	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE	
Semester 1											
MA 1013	Mathematics	С	3	1/1	3.0				20	80	
CS 1032	Programming Fundamentals	С	2	3/1	3.0				20	80	
ME 1032	Mechanics	С	2	3/4	2.0				20	80	
MT 1022	Properties of Materials	С	2	3/4	2.0				20	80	
CE 1022	Fluid Mechanics	С	2	3/4	2.0				20	80	
EE 1012	Electrical Engineering	С	2	3/4	2.0				20	80	
EL 1012	Language Skill Enhancement	С	~	3/1	1.0				20	80	
MN 1012	Engineering in Context	С	1	=		1.0	15.0	1.0	30	70	
		-		Tot	al for Se	mester 1	15.0	1.0			
Semester 2											
MT 1030	Crystallography & Phase Transformations	С	1.5	3/2	2.0				40	60	
MT 1063	Polymer Science	С	1.5	3/2	2.0				40	60	
MT 1952	Engineering Design	С	0.5	3/1		1.5			100	0	
MT 1962	Engineering Skill Development	С	0.5	3/1		1.5			100	0	
EN 1802	Basic Electronics	С	2	3/4	2.0				30	70	
ME 1090	Engineering Drawing and Computer Aided Modelling	С	2	3/1	3.0				100	0	
CS 2812	Visual Programming	С	1	3/1	2.0				60	40	
MA 1023	Method of Mathematics	С	3	1/1	3.0				30	70	
EL 1022	Language Skill Enhancement II	С	÷ è		1.0				30	70	
ME 1100	Mechanics of Materials I	С	1.5	3/2	2.0		17.0	3.0	30	70	
DE 2XXX	Humanities Elective-I	E	1.5	3/2	2.0		2.0	0.0			
MN 1030	Entrepreneurship Skill Development (Continuing)	0	0.5	3/2		1.0			70	30	
				Tot	al for Se	mester 2	19.0	3.0			

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Module Code	Module Name	Category	Lectures hrs/	Lab/ Assignments	Credits		Norm		Evaluation (%)	
			week	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE
Semester 3										
MT 2170	Ceramic Science & Technology	С	3.5	3/2	4.0				40	60
MT 2052	Communication Skills	С	1.5	3/2	2.0				100	0
MT 2160	Introduction to Metals & Alloys	С	1.5	3/2	2.0				40	60
MT 2190	Principles of Materials Science & Engineering	С	1.5	3/2	2.0				40	60
MT 2153	Polymer Technology	С	1.5	3/2	2.0				40	60
ME 1822	Basic Engineering Thermodynamics	С	1.5	3/2	2.0				30	70
MA 2013	Differential Equations	С	2	=	2.0				30	70
MA 2023	Calculus	С	2	2	2.0				30	70
EE 2803	Applied Electricity	С	1.5	3/2	2.0				30	70
EN 2852	Applied Electronics	С	1.5	3/2	2.0		22.0	0.0	40	60
MN 1030	Entrepreneurship Skill Development	0	0.5	3/2		1.0			70	30
		7/		Tot	al for Se	mester 3	22.0	0.0		
Semester 4										
MT 2033	Degradation of Materials	С	1.5	3/2	2.0				40	60
MT 2073	Metal Forming and Machining	С	1.5	3/2	2.0				40	60
MT 2180	Solid State Materials	С	3.5	3/2	4.0				40	60
MA 2033	Linear Algebra	С	2	2	2.0				30	70
MA 3013	Applied Statistics	С	2	= =	2.0				30	70
ME 2832	Mechanics of Machines	С	1.5	3/2	2.0				30	70
ME 2060	Mechanics of Materials II	С	3.5	3/2	4.0				30	70
ME 2850	Fundamentals of Machine Element Design	С	2	3/1	3.0		21.0	0.0	40	60
MN 2010	Entrepreneurial Leadership	0	1.5	3/2	2.0				50	50
		1		Tot	al for Se	mester 4	21.0	0.0		

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Module	Module Name	Category	Lectures	Lab/ Assignments	Credits		No	orm	n Evalu	
Code			hrs/week	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE
Semester 5										
MT 3053	Characterization of Materials	С	2.5	3/2	3.0				40	60
MT 3093	Polymer Engineering	С	2.5	3/2	3.0				40	60
MT 3902	Industrial Visits I	С		*		1.0			100	0
ME 3812	Machine Design	С	1	3/1	2.0				30	70
MA 3023	Numerical Methods	С	2	30	2.0				30	70
MN 3042	Business Economics and Financial Accounting	С	3		3.0		13.0	1.0	30	70
MT 3083	Latex Science and Technology	E	2.5	3/2	3.0				40	60
MT 3213	Metal Casting and Powder Metallurgy	E	1.5	3/2	2.0				40	60
MT 3243	Joining of Materials	E	1.5	3/2	2.0				40	60
MT 3300	Electronic and Optical Device Engineering	E	2.5	3/2	3.0				40	60
MT 4723	Construction Materials	E	1.5	3/2	2.0]		40	60
ME 3012	Control Systems and Instrumentation	E	3.5	3/2	4.0]		30	70
MN 3052	Industrial Management & Marketing	E	2.5	3/2	3.0		7.0	0.0	30	70
MN 3010	Multidisciplinary Design, Innovation and Venture Creation	0	1.5	3/2	2.0				50	50
Total for Semester 5								1.0		
Training Ser	nester									
MT 3992	Industrial Training	С	-			6.0	0.0	6.0	100	0
	i i	Total for 1	raining .	Semester		6.0				

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Module Code	Module Name	Category	Lectures hrs/ week	Lab/ Assignments hrs/weeks	Credits		Norm		Evaluation (%)	
					GPA	NGPA	GPA	NGPA	CA	WE
Semester 6		11				-				
DE 2xx2	Humanities Elective-II	E(C)			2.0					
MT 4333	Heat Treatments and Strengthening Mechanisms of Metals	С	2.5	3/2	3.0				40	60
MT 4203	Research Project (Continuing)	С	(2)		1.0				100	0
MT 4902	Industrial Visits-II	С		-		2.0	6.0	2.0	100	0
MT 3713	Extraction of Metals	E	1.5	3/2	2.0				40	60
MT 4343	Cleaner Production	E	1.5	3/2	2.0		2.0	0.0	40	60
Total for Semester 6							8.0	2.0		

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Module Code	Module Name	Category	Lectures hrs/	Lab/ Assignments	Credits		Norm		Evaluation (%)	
			week	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE
Semester 7										
MT 4023	Total Quality Management	С	1.5	3/2	2.0				40	60
MT 4033	Optical and Electron Microscopy	С	1.5	3/2	2.0				40	60
MT 4053	Mechanical Behaviour of Materials	С	1.5	3/2	2.0				40	60
MT 4203	Research Project (Continuing)	С	=		4.0		10.0	0.0	100	0
MT 4063	Industrial Polymer Process Engineering	E	2.5	3/2	3.0				40	60
MT 4073	Design & Fabrication of Polymer Products	E	2.5	3/2	3.0				40	60
MT 4283	Nano Materials	E	1.5	3/2	2.0				40	60
MT 4750	Ferrous and Non Ferrous Alloys	E	2.5	3/2	3.0				40	60
MT 4760	Electro Ceramics	E	2.5	3/2	3.0				40	60
MT 4743	Composites	E	1.5	3/2	2.0				40	60
MN 4132	Consumer & Industrial Marketing	E	2		2.0				30	70
MN 4022	Engineering Economics	E	2	84	2.0				30	70
MN 4122	Human Resource Management and Industrial Relations	E	2		2.0				30	70
MN 3020	Entrepreneurship Business Basics	E	2	3/1	3.0		7.0	0.0	50	50
		· · · · · · · · · · · · · · · · · · ·		Tot	al for Se	emester 7	17.0	0.0		

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Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments	Credits		Norm		Evaluation (%)	
			III3/ WEEK	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE
Semester 8										
MT 4203	Research Project	С	말		3.0				100	0
MT 4113	Selection of Materials, Failure Analysis and Non Destructive Testing	С	2.5	3/2	3.0				40	60
MN 4042	Technology Management	С	2	=	2.0				30	70
MN 4900	Professional Ethics	С	1	-	16	1.0	8.0	1.0	30	70
MT 4083	Dies and Moulds for Polymer Processing	E	2.5	3/2	3.0		0.0		40	60
MT 4093	Polymer Process Control and Instrumentation	E	2.5	3/2	3.0				40	60
MT 4713	Refractories & Kiln Technology	E	1.5	3/2	2.0				40	60
MT 4740	Smart Materials and Devices	E	2.5	3/2	3.0				40	60
MT 3310	Magnetism & Magnetic Materials for Device Engineering	Ε	2.5	3/2	3.0				40	60
MT 4773	Paint Technology	E	1.5	3/2	2.0				40	60
MN 4010	Business Plan Development	E	1.5	3/2	2.0				30	70
MA 4022	Operational Research	E	3	2	3.0				30	70
MN 4072	Small Business Management & Entrepreneurship	E	2	-	2.0		7.0	0.0	30	70
	·			Total	al for Sei	mester 8	15.0	1.0		- 0
				Total credits fo	r the Pro	gramme	137	14		

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