

UNIVERSITY OF PETROSANI

Faculty MECHANICAL AND ELECTRICAL ENGINEERING

Field MECHANICAL ENGINEERING

 Study Program **Mining Machinery and Equipment**

Engineers - IF, 4 years x 2 sem./year x 14 weeks./sem. x 28 hours/week., 4 weeks. main exam's sessions/sem.

MINISTRY of NATIONAL EDUCATION
STUDY PLAN

valid beginning with academic year 2009 - 2010

No.	FIRST YEAR		Semester 1				Semester 2				Prepare hours		Credit points		Ex., C., V.		No. of hours		
	Courses	Courses code	C	S	L	P	C	S	L	P	Sem.1	Sem.2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Class	Apl.	Total
1	Chemistry	2MM1OF01	2		2						2		3		E1		28	28	56
2	Mathematical Analysis	2MM1OF02	2	2							2		5		E1		28	28	56
3	Descriptive Geometry	2MM1OF03	2		2						1.5		4		C1		28	28	56
4	General Economy	2MM1OX04	2		1						1		3		C1		28	14	42
5	Materials Science and Engineering	2MM1OD05	3		2						2.5		6		E1		42	28	70
6/7	Computer Programming and Use I, II	2MM1OF06 / 2MM1OF07	1		2		1		2		1	1	3	4	C1	E2	28	56	84
8/9	Mechanics I, II	2MM1OD08 / 2MM2OD09	2		1		2	1	1		1	1	4	5	E1	E2	56	42	98
10/11	Optional course OP11 I, II	2MM1AX10 / 2MM2AX11		2				2			1	1	2	2	C1	C2	0	56	56
12	Optional course OP12	2MM2AX12					2	1				1		3		C2	28	14	42
13	Linear Algebra, Analytical and Differential Geometry	2MM2OF13					2	2			2		4		E2	28	28	56	
14	Physics	2MM2OF14					2	2			2		4		E2	28	28	56	
15	Technical Drawing	2MM2OF15					1	2			1.5		3		C2	14	28	42	
16	Materials Technology	2MM2OD16					3	2			2.5		5		E2	42	28	70	
	TOTAL hours C, S, L,P/week.		14	4	10	0	13	6	9	0	12	12	30	30	4E+4C	5E+4C	378	406	784
17/18	Sport I, II*	2MM1OX17 / 2MM2OX18		2				2							A/R	0	56	56	

No.	SECOND YEAR		Semester 3				Semester 4				Prepare hours		Credit points		Ex., C., V.		No. of hours		
	Courses	Courses code	C	S	L	P	C	S	L	P	Sem.1	Sem.2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Class	Apl.	Total
19	Special Mathematics	2MM3OF19	2	2							2		4		E3		28	28	56
20	Numerical Methods	2MM3OF20	2	2							2		4		E3		28	28	56
21	Mechanisms	2MM3OD21	3		2	1					2.5		7		E3		42	42	84
22	Optional course OP 21	2MM3AD22	2		1						1		3		C3		28	14	42
23/24	Materials Strength and Elements of Elasticity Theory I, II	2MM3OD23 / 2MM4OD24	3	1	2		2	1	1		2.5	2	6	5	E3	E4	70	70	140
25/26	Infographics (CAD) I, II	2MM3OD25 / 2MM4OD26	1		2		1		2		1	1	3	3	C3	C4	28	56	84
27/28	Optional course 11 III, IV	2MM3AX27 / 2MM4AX28		2				2			1	1	2	2	C3	C4	0	56	56
29	Optional course OP 22	2MM4AX29					2	1			1		3		C4	28	14	42	
30	Machine -Tools and Cutting Processes	2MM4OD30					3		2		2		5		E4	42	28	70	
31	Machine Parts I	2MM4OD31					2		1		1.5		3		C4	28	14	42	
32	Dimensional Tolerance and Control	2MM4OD32					2		2		1.5		4		E4	28	28	56	
33	Vibrations	2MM4OD33					2		2		2		4		E4	28	28	56	
34	Practical Training I, 3weeks. x 40 h/week.	2MM4OS34											2		C4			120	
	TOTAL hours C, S, L,P/week.		13	7	7	1	14	4	10	0	12	12	29	31	4E+3C	4E+5C	378	406	904

No.	THIRD YEAR		Courses code	Semester 3				Semester 4				Prepare hours		Credit points		Ex., C., V.		No. of hours		
	Courses			C	S	L	P	C	S	L	P	Sem.1	Sem.2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Class	Apl.	Total
35	Heat Engineering and Thermal Machines		2MM5OD35	3		2					2		5		E5		42	28	70	
36	Mechanics of Fluids and Hydraulic Machines		2MM5OD36	3		2					2		5		E5		42	28	70	
37	Electrotechnical and Electrical Drives		2MM5OD37	3		2					2		5		E5		42	28	70	
38	Machine Parts II		2MM5OD3	2		2	2				2.5		7		E5		28	56	84	
39	Finite Elements Analysis		2MM5OS39	2		2					2		3		C5		28	28	56	
40	Optional course OP31		2MM5AS40	2		1					1.5		4		C5		28	14	42	
41	Industrial Electronics		2MM6OD41					2		1			3		E6		28	14	42	
42	Tribology		2MM6OD42					2		1		1.5	3		E6		28	14	42	
43	Hydraulic and Pneumatic Drives		2MM6OD43					2		2	1	2.5	7		E6		28	42	70	
44	Systems Theory and Automation		2MM6OD44					2		1		1.5	3		E6		28	14	42	
45	Optional course OP32		2MM6AX45					2		1		1	3		C6		28	14	42	
46	Processing Equipment		2MM6OS46					2		2		2	4		E6		28	28	56	
47	Mining Technologies		2MM6OS47					3		2		1.5	4		C6		42	28	70	
48	Labor Safety in the Mining Industry		2MM6OS48					1		1		1	2		C6		14	14	28	
49	Practical Training II, 3weeks. × 40 h/week.		2MM6OS49										2		C6		120			
TOTAL hours C, S, L,P/week.				15	0	11	2	16	0	11	1	12	12	29	31	4E+2C	5E+4C	434	350	904

No.	FOURTH YEAR		Courses code	Semester 3				Semester 4				Prepare hours		Credit points		Ex., C., V.		No. of hours		
	Courses			C	S	L	P	C	S	L	P	Sem.1	Sem.2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Class	Apl.	Total
50	Mining Mechanical Installations		2MM7OS50	3		2	1					2		6		E7		42	42	84
51	Optional course OP 41		2MM7AS51	2		2						2		4		C7		28	28	56
52/53	Equipment and Installations Manufacturing Technology I, II		2MM7OS52 / 2MM8OS53	2		1		2		1		2	2	3	3	E7	E8	56	28	84
54/55	Mining Machines and Complexes I, II		2MM7OS54 / 2MM8OS55	4		1		1		1	1	2	2	6	4	E7	E8	70	42	112
56/57	Loading and Transport Systems and Equipment I, II		2MM7OS56 / 2MM8OS57	3		1	2	2		1		2	2	6	4	E7	E8	70	56	126
58/59	Mining Electrical Installations I, II		2MM7OS58 / 2MM8OS59	2		2		2		1	1	2	2	4	3	C7	E8	56	56	112
60	Products Reliability and Maintenance		2MM8OS60					2		1			2	3		C8		28	14	42
61	Optional course OP 42		2MM8AS61					1		1		1	2		C8		14	14	28	
62	Optional course OP 43		2MM8AS62					1		1		1	2		C8		14	14	28	
63	Elaboration of graduation paper, 14 weeks × 8 h/week.		2MM8OS63								8		10		C8		112			
TOTAL hours C, S, L,P/week.				16	0	9	3	11	0	7	10	12	12	29	31	4E+2C	4E+4C	378	406	784

No.	ANNEX I		Courses code	Sem.	C	S	L	Credit points	Ex., Cv.	No. of hours				
	Courses facultative									Class	Apl.	Total		
64/65	Sport III, IV		2MM3LX64 / 2MM4LX65	3, 4	-	-	2		A/R	A/R	-	56	56	
66-69	Foreign Language V,....,VIII		2MM5LX66 / 2MM6LX67 / 2MM7LX68 / 2MM8LX69	5 ... 8	-	2	-	2	2	C6	C8	-	104	104
70/71	Experimental Techniques in Mechanical Engineering I, II		2MM5LD70 / 2MM6LD71	5, 6	1	-	1	2	2	C5	C6	28	28	56
72	Creativity and Inventions		2MM6LD72	6	2	1	-	3	-	-	C6	28	14	42
73/74	Industrial Manipulators and Robots I, II		2MM7LS73 / 2MM8LS74	7, 8	1	-	1	3	3	C7	C8	24	24	48
75	Energy Management		2MM8LS75	8	2	-	1	3	-	-	C8	20	10	30

ANNEX II		Optional courses			
An	Cod	Courses			
I, II		Enlish	French	German	Spanish
I	OP 11	History of Culture and Civilization	Logics		
II	OP 12	Labor Law and Economic Legislation	Economic management systems		
II	OP 21	Basics of Experimental Research	Technologies and equipment control		
III	OP 22	Metrology	Engineering Quality		
III	OP 31	Industrial Management	Economic Analysis of Production Systems		
IV	OP 32	Design of Mining Equipment	Design of Transport Systems		
IV	OP 41	Unconventional Processing in Machine Building	Recovery and Reuse of Materials		
IV	OP 42	Displacement rocks with high pressure hydraulic jet	Mechanical Cutting of Non - Homogeneous Materials		
IV	OP 43				

Legend: C – class; S – seminar; L – laboratory; P – project; **Ex.** (E1...8) – exam in semester 1...8; **Cv.** (C1...8) – colloquy in semester 1...8

RECTOR,
Prof.univ.dr.ing.mat. POP EMIL

DEAN,
Prof.univ.dr.ing. ARON POANTA