

CURRICULUM
EDUCATIONAL AND QUALIFICATION DEGREE: BACHELOR
COURSE OF STUDY: COMPUTER TECHNOLOGIES IN ENGINEERING
VOCATIONAL FIELD: 5.13 GENERAL ENGINEERING

FORM OF STUDY: FULL-TIME

DURATION OF STUDY : 4 YEARS

Duration of semesters: 14 weeks

Duration of 8th semester: 10 weeks (of which 9 weeks of classes and 1 week of production practical training)

Adopted at a session of the Academic Council of the University of Mining and Geology of 10th July 2017

Year	Semester	№	Course unit code	Full name of the course unit (course projects, practical training)	Form of control	Teaching hours (weekly)		Teaching hours per type of seminars			Overall teaching hours per semester	Credits by ECTS	
						L	S	S	Lab	P			
First	First	1	371102	Introduction to Informatics	Exam	2	3		3		70	7	
		2	371104	Programming Fundamentals	Exam	2	4		4		84	8	
		3	361101	Higher Mathematics, Part I (Linear Algebra and Analytical Geometry)	Exam	2	3	3			70	6	
		4	121101	General Geology	Exam	2	1		1		42	4	
		5	181101	Physics	Exam	2	2		2		56	5	
		6	421101	English			2	2			28		
		7	431143	Physical Education ans Sports - 2 hrs. per week							28		
	Overall for the first semester					5+0	10	15	5	10	0	378	30
	Second	Second	8	371152	Theoretical foundations of computer science	Exam	2	2		2		56	5
			9	371106	Object-Oriented Programming	Exam	2	4		4		84	8
			10	361102	Higher Mathematics, Part II (Mathematical Analysis)	Exam	2	3	3			70	6
			11	341107	Electronics	Exam	2	2		2		56	5
			12	421101	English	CA		2	2			28	4*
			13	431143	Physical Education ans Sports - 2 hrs. per week	CA						28	2*
			14		Optional subject from group 1	Exam	2	1		1		42	4
Overall for the second semester					5+2	10	14	5	9	0	364	28+6*	
	15	371157	Practical training in Object Oriented Programming 7 days	CA						30	2		
Overall for the first year, including practical training					9+4	20	29	10	19	0	772	60+6*	
Second	Third	16	371153	Computer Networks and Communications I	Exam	2	2		2		56	8	
		17	371109	Visual Programming	Exam	2	4		4		84	9	
		18	361115	Multi-Dimensional Analysis and Differential Equations	Exam	2	3		3		70	8	
		19	421101	English Language			2	2			28		
		20	431143	Physical Education ans Sports - 2 hrs. per week							28		
		21		Optional subject from group 2	Exam	2	2		2		56	7	
				Facultative:humanities, social and legal sciences	CA	2	1	1			28	2**	
	Overall for the third semester					4+0	8	13	2	11	0	322	32
	Fourth	Fourth	22	371164	C # Basics	Exam	2	3		3		70	8
			22	371154	Computer Networks and Communications II	Exam	2	2		2		56	7
			24	371110	Operating Systems	Exam	2	2		2		56	7
			25	361110	Applied Statistics	Exam	2	2	2			56	6
			26	421101	English	CA		2	2			28	4*
27			431143	Physical Education ans Sports - 2 hrs. per week	CA						28	2*	
Overall for the fourth semester					4+2	8	11	4	7	0	294	28+6*	
Overall for the second year, including practical training					8+4	16	24	6	18	0	616	60+6*	

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						L	S	S	Lab	P			
Third	Fifth	28	371111	Database Management Systems	Exam	2	4		4		84	8	
		29	371155	Web design	Exam	1	3		3		56	6	
		30	371112	Applications Software Development	CA	1	2		2		42	6	
		31	371108	Data Structures and algorithms	Exam	2	3		3		70	7	
		32	271113	Economics and Management	Exam	2	1	1			42	4	
		33	421101	English			2	2			28		
	Overall for the fifth semester					4+1	8	15	3	12	0	322	31
	Sixth	34	371113	Programming in the Internet environment	Exam	1	3		3		56	8	
		35	371114	Computer Graphics	Exam	1	3		3		56	8	
		36	331117	Microprocessor Equipment	Exam	2	3		3		70	8	
		37	261102	Technical Safety	CA	2	2		2		56	4	
		38	421101	English	CA		2	2			28	4*	
		Overall for the sixth semester					3+2	6	13	2	11	0	266
	39	371142	Production practical training - 5 days	CA							30	1	
	Overall for the third year, including practical training					7+4	14	28	5	23	0	618	60+4*
	Fourth	Seventh	40	371116	Computer Modelling	Exam	1	2		2		42	8
			41	331122	Design of Embedded Systems	Exam	2	2		2		56	6
			42	421101	English			2	2			28	
			43		Optional subject from group 3	CA	1	3		3		56	6
44				Optional subject from group 4	Exam	2	2		2		56	6	
Overall for the seventh semester					3+1	6	11	2	9	0	238	26	
Eighth		45	371119	Information Protecting and Security	Exam	3	3		3		60	8	
		46	371120	Geo-Information Systems (GIS)	Exam	2	3		3		50	7	
		47	421101	English	CA		3	3			30	4*	
		48		Optional subject from Group 5	Exam	3	3		3		60	8	
		Overall for the eighth semester					3+1	8	12	3	9	0	200
49		371142	Production practical training - 5 days	CA							30	1	
State Exam											10		
Overall for the fourth year, including practical training					6+3	14	23	5	18	0	468	60+4*	
OVERALL FOR THR FULL COURSE OF STUDY					31+12	64	104	26	78	0	2474	240+20*	

* The credits above 240 are formed from the course units in *English Language* and *Physical Education and Sports*

Abbreviations: **CA** - Continuous Assessment, **L** - Lectures, **S** - Seminars, **Lab** - Laboratory seminars, **P** - Practical seminars

Parameters of the educational process

Optional subject from group 1	
221248	a. Technology of Opencast Mining
211219	b. Technology of Underground Mining

Optional subject from group 2	
351201	a. Machine Sciences
281112	b. Applied Mechanics of Continuous Media /environment/

Optional subject from group 3	
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Overall teaching hours 2474, distributed as follows:

Lectures 856

Seminars 1396

Physical Education and Sports - 112

Practice - 90, of which:

- practical training - 30

- production practical training (pre-diploma practice

Exams - 31, Continuous Assessment - 12