

Fundamental field (DFI): Engineering sciences
Branch of science (RSI): Mechanical Engineering, mechatronics, industrial engineering and management
Bachelor studies program (DL): Environmental Engineering

Code DFI, Code RSI Code DL :
20.70.190

Cycle	c1c2c3	a1a2	current year
L	080	17	17

EDUCATION PLAN
2017 - 2021

	YEAR I				YEAR II																															
	SEMESTER 1				SEMESTER 2				SEMESTER 3				SEMESTER 4																							
1	Algebra and geometry				Physics				Fundamentals of electric and electronic engineering				Fundamentals of automations																							
	L080.17.01.F1	4	E	28	28	0	0	DF	56	L080.17.02.F1	5	E	42	14	14	0	DF	55	L080.17.03.D1	3	D	28	0	14	0	DD	48	L080.17.04.D1	4	E	28	0	21	0	DD	61
2	Materials sciences				Mathematical analysis				Computer assisted mathematics				Microeconomics																							
	L080.17.01.D2	5	E	28	0	28	0	DD	58	L080.17.02.F2	4	E	28	28	0	0	DF	56	L080.17.03.F2	4	D	28	14	14	0	DF	56	L080.17.04.C2	3	D	28	14	0	0	DC	50
3	Inorganic chemistry				Biology				Climatology, meteorology and hydrology				Biochemistry																							
	L080.17.01.F3	5	E	28	28	14	0	DF	60	L080.17.02.F3	4	E	28	0	28	0	DF	61	L080.17.03.D3	4	E	28	0	28	0	DD	66	L080.17.04.S3	3	D	14	14	0	0	DS	26
4	Using and programming computers				Organic chemistry				Microbiology				Physical chemistry II																							
	L080.17.01.F4	5	D	28	0	42	0	DF	60	L080.17.02.F4	5	E	28	0	28	0	DF	56	L080.17.03.F4	3	E	28	0	21	0	DF	51	L080.17.04.F4	6	E	35	14	28	0	DF	77
5	General chemistry				Fundamentals of mechanical engineering				Measurements				Instrumental analytical chemistry																							
	L080.17.01.F5	5	E	28	14	14	0	DF	47	L080.17.02.D5	4	D	28	28	0	0	DD	66	L080.17.03.D5	3	E	28	0	14	0	DD	44	L080.17.04.D5	5	E	28	0	28	0	DD	56
6	Culture and civilization				Computer technical graphics				Physical chemistry I				Environmental hydraulics																							
	L080.17.01.C6	2	D	14	14	0	0	DC	24	L080.17.02.F6	4	D	14	0	28	0	DF	60	L080.17.03.F6	6	E	35	14	28	0	DF	77	L080.17.04.D6	4	E	28	14	14	0	DD	56
7	Foreign languages				Foreign languages				Analytical chemistry				Ecology and ecotoxicology																							
	L080.17.01.C7	2	D	0	28	0	0	DC	56	L080.17.02.C7	2	D	0	28	0	0	DC	56	L080.17.03.D7	5	D	28	0	28	0	DD	56	L080.17.04.D7	3	D	28	0	14	0	DD	44
8	Sport				Sport				Sport				Sport																							
	L080.17.01.C8	2	D	0	14	0	0	DC		L080.17.02.C8	2	D	0	14	0	0	DC		L080.17.03.C8	2	D	0	14	0	0	DC		L080.17.04.C8	2	D	0	14	0	0	DC	
9	Facultative Discipline 1				Facultative Discipline 2				Facultative Discipline 3				Facultative Discipline 4																							
	L080.17.01.f9-ij							f		L080.17.02.f9-ij							f		L080.17.03.f9-ij							f		L080.17.04.f9-ij					f			
total/sem.	hours:	378			VPI:	361			hours:	378			VPI:	410			hours:	392			VPI:	398			hours:	364			VPI:	370						
	credits:	30			evaluations:4E, 4D	8			credits:	30			evaluations:4E, 4D	8			credits:	30			evaluations:4E, 4D	8			credits:	30			evaluations:4E, 4D	8						
total/week	hours:	27				27			hours:	27				28			hours:	28				26			hours:	26				26						
	of which:	11			9	7	0	(c, s, l, p)	of which:	12			8	7	0	(c, s, l, p)	of which:	14.5			3	10.5	0	(c, s, l, p)	of which:	13.5			5	7.5	0	(c, s, l, p)				

RECTOR,
Prof.dr.eng.Viorel-Aurel ȘERBAN

DEAN,
Prof. dr. eng. Nicolae VASZILCSIN

**FACULTATIVE DISCIPLINE
2017 - 2021**

		YEAR I										YEAR II																																																																	
		SEMESTER 1					SEMESTER 2					SEMESTER 3					SEMESTER 4																																																												
01	Educational psychology										Pedagogy I					Pedagogy II					Didactics																																																								
	L080.17.01.f9-01	5	E	28	28	0	0	f	70	L080.17.02.f9-01	5	E	28	28	0	0	f	60	L080.17.03.f9-01	5	E	28	28	0	0	f	60	L080.17.04.f9-01	5	E	28	28	0	0	f	60																																									
02											Volunteer										Volunteer																																																								
											L080.17.02.f9-02	2	C	0	0	28	0	f	40								L080.17.04.f9-02	2	C	0	0	28	0	f	40																																										
03																					Social responsibility and civic activism																																																								
																										L080.17.04.f9-03	2	E	28	28	0	0	f	40																																											
total/ sem.	hours:	56					VPI:					70					hours:	84					VPI:					100					hours:	56					VPI:					60					hours:	140					VPI:					140																	
	credits:	5					evaluations:					7					credits:	5					evaluations:					9					credits:	5					evaluations:					9					credits:	9					evaluations:					9																	
total/ week	hours:	4										hours:	6										hours:	4										hours:	10																																										
	of which:	2					2					0					0					(c, s, l, p)					of which:	2					2					0					0					(c, s, l, p)					of which:	4					4					2					0					(c, s, l, p)			

Legend

Discipline Name									
Code	nc	FE	c	s	l	p	CF	VPI	

Cod = discipline code
nc = no. of trasferable credits
FE = evaluation mode
FE ∈ {E, D, C, P-E, P-D}
E=exam
D=distributed evaluation
C=colloquy
P - E - autonomously project with evaluation similar to the disciplines with exam
P - D - autonomously project with evaluation similar to the disciplines with distributed evaluation
c=course/semester hours no

s= seminar hours no
l=laboratory hours no
p=project hours no
CF=formative category of discipline
CF∈{DC, DD, DF, DS}
DC - complementary discipline
DD - discipline in field
DF - fundamental discipline
DS - specialized discipline
VPI = Volume of hours for individual training

Example

Mathematical analysis									
Code	4	E	28	28	0	0	DF	60	

RECTOR,
Prof.dr.eng.Viorel-Aurel ȘERBAN

DEAN,
Prof. dr. eng. Nicolae VASZILCSIN

Fundamental field (DFI): Engineering sciences
Branch of science (RSI): Mechanical Engineering, mechatronics, industrial engineering and management
Bachelor studies program (DL): Environmental Engineering
Specialization (S): ENGINEERING AND ENVIRONMENTAL PROTECTION IN INDUSTRY

Code DFI	Code RSI	Code DL	Code S
20.70.190.10			

Cycle	c1c2c3	a1a2	current year
L	082	17	17

EDUCATION PLAN
2017 - 2021

	YEAR III**										YEAR IV***																									
	SEMESTER 5					SEMESTER 6					SEMESTER 7					SEMESTER 8																				
1	Management					Marketing					Water pollution control					Optional Course VIII																				
	L082.17.05.D1	2	D	14	14	0	0	DD	29	L082.17.06.D1	2	D	14	14	0	0	DD	29	L082.17.07.S1	4	E	28	0	28	0	DS	46	L082.17.08.S1-ij	5	E	28	0	28	0	DS	37
2	Communication					Biotechnologies in environmental protection					Soil pollution control					Optional Course IX																				
	L082.17.05.C2	2	D	0	14	0	0	DC	14	L082.17.06.D2	4	D	28	0	28	0	DD	59	L082.17.07.S2	4	E	28	0	28	0	DS	44	L082.17.08.S2-ij	3	E	28	14	0	0	DS	54
3	Environmental chemistry					Installations and equipment in environmental engineering					Air pollution control					Optional Course X																				
	L082.17.05.D3	5	E	28	0	28	14	DD	66	L082.17.06.S3	4	E	28	0	14	7	DS	68	L082.17.07.S3	4	D	28	0	14	0	DS	33	L082.17.08.S3-ij	4	E	28	0	14	0	DS	58
4	Topography and Geodesy					Waste Management					Industrial technologies and specific pollutants					Optional Course XI																				
	L082.17.05.D4	4	D	28	0	28	0	DD	39	L082.17.06.S4	4	D	28	14	0	14	DS	61	L082.17.07.S4	4	D	28	0	28	0	DS	48	L082.17.08.S4-ij	3	E	28	0	0	14	DS	42
5	Fundamentals of Environmental Engineering					Environmental Factors Monitoring					Optional Course V					Diploma Thesis Elaboration*																				
	L082.17.05.D5	4	E	28	0	28	0	DD	58	L082.17.06.D5	4	E	28	0	28	0	DD	44	L082.17.07.S5-ij	5	E	28	0	28	0	DS	44	L082.17.08.S5	5	D	0	0	0	182	DS	181
6	Optional Course I					Optional Course III					Optional Course VI					Diploma exam**																				
	L082.17.05.D6-ij	5	E	28	14	28	0	DD	55	L082.17.06.D6-ij	4	E	28	0	28	0	DD	44	L082.17.07.S6-ij	5	E	28	14	0	14	DS	44	L082.17.08.6	10	E	0	0	0	0		
7	Optional Course II					Optional Course IV					Optional Course VII																									
	L082.17.05.D7-ij	4	E	28	0	28	14	DD	47	L082.17.06.D7-ij	4	E	28	0	28	0	DD	44	L082.17.07.S7-ij	4	D	28	14	0	0	DS	33									
8	Practice (120 HOURS)					Practice (120 HOURS)																														
	L082.17.05.D8	4	C	0	0	0	0	DD	2	L082.17.06.D8	4	C	0	0	0	0	DD	2																		
9	Facultative Discipline 1					Facultative Discipline 2					Facultative Discipline 3					Facultative Discipline 4																				
	L082.17.05.f9-ij							f		L082.17.06.f9-ij							f		L082.17.07.f9-ij							f		L082.17.08.f9-ij					f			
total/sem.	hours:	364			VPI:	310			hours:	357			VPI:	351			hours:	364			VPI:	292			hours:	364			VPI:	372						
	credits:	30			evaluations:	4E,3D,1C			8	credits:	30			evaluations:	4E, 3D, 1C			8	credits:	30			evaluations:	4E, 3D, 1C			8	credits:	30			evaluations:	5E,1 D			6
total/week	hours:	26							hours:	26							hours:	26							hours:	26										
	of which:				11	3	10	2	(c, s, l, p)	of which:				13	2	9	2	(c, s, l, p)	of which				14	2	9	1	(c, s, l, p)	of which:				8	1	3	14	(c, s, l, p)

* Lasting 7 weeks x 26 hours of which 2 weeks x 26 hours internship; ** consists of: a. verification of basic and specialized knowledge; b. Diploma Thesis susținerea lucrării de licență/diplomă.

***The Optional Courses will be chosen by students from the offert presented in the table "Optional Courses".

RECTOR,
Prof.dr.eng.Viorel-Aurel ȘERBAN

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**OPTIONAL COURSES - IPMI
2017 - 2021**

	YEAR III								YEAR IV																											
	SEMESTER 5				SEMESTER 6				SEMESTER 7				SEMESTER 8																							
01	Optional Course I Electrochemistry and anticorrosive protection				Optional Course III Sources of Energy				Optional Course V Wastewaters treatment technologies				Optional Course VIII Technologies for Water Treatment																							
	L082.17.05.D6-01	5	E	28	14	28	0	DD	55	L082.17.06.D6-01	4	E	28	0	28	0	DD	44	L082.17.07.S5-01	5	E	28	0	28	0	DS	44	L082.17.08.S1-01	5	E	28	0	28	0	DS	37
02	Optional Course I Environmental electrochemistry				Optional Course III Sources of Alternative Energy				Optional Course V City wastewaters treatment plant				Optional Course VIII Installations for water treatment																							
	L082.17.05.D6-02	5	E	28	14	28	0	DD	55	L082.17.06.D6-02	4	E	28	0	28	0	DD	44	L082.17.07.S5-02	5	E	28	0	28	0	DS	44	L082.17.08.S1-02	5	E	28	0	28	0	DS	37
03	Optional Course II Pollutants Dispersion				Optional Course IV Transfer processes (mass and thermic)				Optional Course VI Environmental Balance				Optional Course IX Environmental legislation																							
	L082.17.05.D7-03	5	E	28	0	28	14	DD	47	L082.17.06.D7-03	4	E	28	0	28	0	DD	44	L082.17.07.S6-03	5	E	28	14	0	14	DS	44	L082.17.08.S2-03	3	E	28	14	0	0	DS	54
04	Optional Course II Pollutants Transport				Optional Course IV Hydro Town Networks				Optional Course VI Impact of Industrial Plants on Environment				Optional Course IX Environmental politics																							
	L082.17.05.D7-04	5	E	28	0	28	14	DD	47	L082.17.06.D7-04	4	E	28	0	28	0	DD	44	L082.17.07.S6-04	5	E	28	14	0	14	DS	44	L082.17.08.S2-04	3	E	28	14	0	0	DS	54
05									Optional Course VII Waste Collection, Transport and Ecological Storage				Optional Course X Quality Control of Environment Factors																							
																		L082.17.07.S7-05	4	D	28	14	0	0	DS	33	L082.17.08.S3-05	4	E	28	0	14	0	DS	58	
06									Optional Course VII Waste processing				Optional Course X Hazard and Chemical Risk																							
																		L082.17.07.S7-06	4	D	28	14	0	0	DS	33	L082.17.08.S3-06	4	E	28	0	14	0	DS	58	
07													Optional Course XI Sustainable development																							
																		L082.17.08.S4-07	3	E	28	0	0	14	DS	42										
08													Optional Course XI Environment Management in Industry																							
																		L082.17.08.S4-08	3	E	28	0	0	14	DS	42										
09																																				
10																																				
11																																				
12																																				

Note: From each group of Optional Courses, a number of disciplines activate based on students' options, the number of students and the financial coverage.

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**FACULTATIVE DISCIPLINE -IPMI
2017 - 2021**

		YEAR III								YEAR IV																														
		SEMESTER 5				SEMESTER 6				SEMESTER 7				SEMESTER 8																										
01	Elarning	L082.17.05.f9-01	2	D	14	14	0	0	f	24	Classroom Management	L082.17.06.f9-01	3	E	14	14	0	0	f	40	Design of industrial processes according to environmental legislation	L082.17.07.f9-01	4	E	28	0	0	0	f	28	Impact assessment and environemnatl balance	L082.17.08.f9-01	4	E	28	0	0	0	f	28
02	Teaching Practice in Secondary Education compulsory 1	L082.17.05.f9-02	3	D	0	0	0	42	f	0	Teaching Practice in Secondary Education compulsory 2	L082.17.06.f9-02	2	D	0	0	0	36	f	0	Experimental Planning and Results Interpretation Methods	L082.17.07.f9-02	5	D	28	0	14	0	f	56	Volunteer	L082.17.08.f9-02	2	C	0	0	28	0	f	40
03											Graduation Exam: Level 1	L082.17.06.f9-03	5	E	0	0	0	0	f	0																				
04											Volunteer	L082.17.06.f9-04	2	C	0	0	28	0	f	40																				
total/sem.	hours:	70		VPI:	24	hours:	64		VPI:	40	hours:	70		VPI:	84	hours:	56		VPI:	68	hours:	70		VPI:	84	hours:	56		VPI:	68	hours:	56		VPI:	68	hours:	56		VPI:	68
	credits:	5		evaluation:		credits:	10		evaluation:		credits:	9		evaluation:		credits:	6		evaluation:		credits:	9		evaluation:		credits:	6		evaluation:		credits:	6		evaluation:		credits:	6		evaluation:	
total/week	hours:	5				hours:	7				hours:	5				hours:	4				hours:	5				hours:	4				hours:	4				hours:	4			
	of which:		1	1	0	3	(c, s, l, p)				of which:		1	1	2	3	(c, s, l, p)					of which:		4	0	1	0	(c, s, l, p)					of which:		2	0	2	0	(c, s, l, p)	

Legend

Discipline Name										
Code	nc	FE	c	s	l	p	CF	VPI		

Cod = discipline code
nc = no. of trasferable credits
FE = evaluation mode
FE ∈ {E, D, C, P-E, P-D}
E=exam
D=distributed evaluation
C=colloquy
P - E - autonomously project with evaluation similar to the disciplines with exam
P - D - autonomously project with evaluation similar to the disciplines with distributed evaluation
c=course/semester hours no

s= seminar hours no
l=laboratory hours no
p=project hours no
CF=formative category of discipline
CF ∈ {DC, DD, DF, DS}
DC - complementary discipline
DD - discipline in field
DF - fundamental discipline
DS - specialized discipline
VPI = Volume of hours for individual training
Example

Mathematical analysis										
Code	4	E	28	28	0	0	DF	60		

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