

"Aurel Vlaicu" University of Arad
 Faculty of Food Engineering, Tourism and Environmental Protection
 Department: Technical and Natural Sciences
 Field: Environmental Engineering
 Specialization: Engineering of Biotechnical and Ecological Systems

STUDY PLAN
Academic term 2023-2024
IST YEAR

Course code	Courses	Course type	S.S./ Sem. (hours)	No. of hours per week and type of assessment											
				I ST semester 14 weeks						II ND semester 14 weeks					
				C	S	L	Pr	Ef	K	C	S	L	Pr	Ef	K
	COMPULSORY IMPOSED														
DIEF1O01	Mathematical analysis	BC	69	2	2	-	-	OE	5	-	-	-	-	-	-
DIEF1O02	Chemistry I	BC	80	3	-	2	-	E	6	-	-	-	-	-	-
DIED1O03	Meteorology and climatology	DC	69	2	2	-	-	E	5	-	-	-	-	-	-
DIEF1O04	Applied Informatics I	BC	44	2	-	2	-	E	4	-	-	-	-	-	-
DIEF1O05	Physics	BC	69	2	-	2	-	E	5	-	-	-	-	-	-
DIEC1O06	Foreign language I	CC	22	-	2	-	-	OE	2	-	-	-	-	-	-
DIEC1O07	Physical education and sport I	CC	11	-	1	-	-	OE (P/R)	1	-	-	-	-	-	-
DIEC1O08	Communication I	CC	47	1	1	-	-	OE	3	-	-	-	-	-	-
DIEF2O09	Ecology I	BC	80	-	-	-	-	-	-	2	1	2	-	E	6
DIEF2O10	Chemistry II	BC	80	-	-	-	-	-	-	3	-	2	-	E	6
DIED2O11	Topography	DC	77	-	-	-	-	-	-	3	-	2	2	E	7
DIES2O12	Applied Informatics II	SC	94	-	-	-	-	-	-	2	-	2	-	E	6
DIEC2O13	Foreign language II	CC	22	-	-	-	-	-	-	-	2	-	-	OE	2
DIEC2O14	Physical education and sport II	CC	11	-	-	-	-	-	-	-	1	-	-	OE (P/R)	1
DIEC2O15	General economy	CC	47	-	-	-	-	-	-	1	1	-	-	OE	3
	TOTAL		822	12	8	6	0	4E 3 OE	30	11	5	8	2	4E 2 OE	30
	TOTAL COMPULSORY S1/S2			12	8	6	0	K30+1		11	5	8	2	K30+1	
	TOTAL COMPULSORY			26						26					
	TOTAL COMPULSORY COURSES IST Year			23C+12S+15L+2Pr						8E+5 VP +2P/R				K60+2	
	ELECTIVE			C	S	L	Pr	Ef	K						
DIEC1F01	Foreign language F I	CC	22	-	2	-	-	OE	2	C	S	L	Pr	Ef	K
DIEF1F02	Chemistry F I	BC	69	2	2	-	-	E	5						
DIEC2F03	Communication II	CC	22							1	1	-	-	OE	2
DIEC2F04	Foreign language F II	CC	22							-	2	-	-	OE	2
DIEF2F05	Chemistry F II	BC	69							2	2	-	-	E	5
	TOTAL ELECTIVE S1/S2			2	4	-	-	K7		1	3	-	-	K9	
	TOTAL ELECTIVE COURSES IST Year			5C+9S						2E+3 OE				K16	

RECTOR,
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 Conf. Univ. Dr. Virgiliu CIUTINA

DEPARTMENT MANAGER,
 Conf. Univ. Dr. Claudiu URSACHI

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IIND YEAR

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				C	S	L	Pr	Ef	K	C	S	L	Pr	Ef	K
	COMPULSORY IMPOSED														
DIED3O01	Environmental physics	DC	58	2	-	1	-	E	4	-	-	-	-	-	-
DIEF3O02	Ecology II	BC	69	2	-	2	-	E	5	-	-	-	-	-	-
DIED3O03	Materials science and engineering I	DC	58	2	1	-	-	OE	4	-	-	-	-	-	-
DIED3O04	Soil science I	DC	44	2	-	2	-	OE	4	-	-	-	-	-	-
DIED3O05	Environmental chemistry	DC	44	2	-	2	-	E	4	-	-	-	-	-	-
DIED3O06	Sources, processes and polluting products	DC	47	1	-	1	-	OE	3	-	-	-	-	-	-
DIES3O07	Ecotoxicology	SC	58	2	-	1	-	E	4	-	-	-	-	-	-
DIEC3O08	Foreign language III	CC	22	-	2	-	-	OE	2	-	-	-	-	-	-
DIEC3O09	Physical education and sport III	CC	11	-	1	-	-	OE (P/R)	1	-	-	-	-	-	-
DIED4O10	Water, air and soil biology	DC	66	-	-	-	-	-	-	2	1	3	-	E	6
DIEF4O11	Chemistry III	BC	80	-	-	-	-	-	-	3	-	2	-	E	6
DIED4O12	Materials science and engineering II	DC	44	-	-	-	-	-	-	2	-	2	-	E	4
DIED4O13	Soil science II	DC	33	-	-	-	-	-	-	2	-	1	-	E	3
DIED4O14	Fluid mechanics	DC	33	-	-	-	-	-	-	2	-	1	-	E	3
DIED4O15	Fluid mechanics	DC	22	-	-	-	-	-	-	-	-	-	2	OE	2
DIED4O16	Domain practice	DC								3 weeks x 6 h / day = 90 ore				OE	4
DIEC4O17	Foreign language IV	CC	22	-	-	-	-	-	-	-	2	-	-	OE	2
DIEC4O18	Physical education and sport IV	CC	11	-	-	-	-	-	-	-	1	-	-	OE (P/R)	1
	TOTAL		722	13	4	9	0	4E 4 OE	30	11	4	9	2	5E 2 OE	30
	TOTAL COMPULSORY S1/S2			13	4	9	0	K30+1		11	4	9	2	K30+1	
	TOTAL COMPULSORY			26						26					
	TOTAL COMPULSORY COURSES IIND Year			23C+9S+18L+2Pr						9E+6 VP +2P/R				K60+2	
	ELECTIVE			C	S	L	Pr	Ef	K	C	S	L	Pr	Ef	K
DIES3F01	Sustainable Development	DC	48	2	-	2	-	OE	4						
DIEC3F02	Foreign language F III	CC	22	-	2	-	-	OE	2						
DIEF3F03	Chemistry F III	BC	69	2	2	-	-	E	5						
DIEC4F04	Foreign language F IV	CC	22							-	2	-	-	OE	2
DIES4F05	The basics of experimental research	DC	69							2	2	-	-	E	5
	TOTAL ELECTIVE S1/S2			4	4	2	-	K11		2	4	-	-	K7	
	TOTAL ELECTIVE COURSES IIND Year			6C+8S+2L						2E+3 OE				K18	

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STUDY PLAN
Academic term 2025-2026
IIIRD YEAR

Course code	Courses	Course type	S.S./ Sem. (hours)	No. of hours per week and type of assessment											
				I ST semester 14 weeks						II ND semester 14 weeks					
				C	S	L	Pr	Ef	K	C	S	L	Pr	Ef	K
	COMPULSORY IMPOSED														
DIES5O01	Environmental monitoring	SC	69	2	-	-	2	E	5	-	-	-	-	-	-
DIES5O02	Genetics	SC	58	2	-	1	-	OE	4	-	-	-	-	-	-
DIED5O03	Transport phenomena and unit operations	DC	66	3	-	1	2	E	6	-	-	-	-	-	-
DIES5O04	Environmental microbiology	SC	69	3	-	1	-	E	5	-	-	-	-	-	-
DIED6O05	Instrumental analysis	DC	44	-	-	-	-	-	-	2	-	2	-	E	4
DIED6O06	Elements of electrochemistry and corrosion	DC	44	-	-	-	-	-	-	2	-	2	-	OE	4
DIES6O07	Environmental resources economy	SC	44	-	-	-	-	-	-	2	1	-	1	E	4
DIES6O08	Ecosystems protection	SC	44	-	-	-	-	-	-	3	-	1	-	E	4
DIES6O09	Ecomarketing	SC	44	-	-	-	-	-	-	1	1	-	-	OE	2
DIES6O10	Specialized practical stage	SC								3 weeks x 6 h / day = 90 h				OE	4
	TOTAL		460	10	-	3	4	-	20	10	2	5	1	-	22
	COMPULSORY OPTIONAL			C	S	L	Pr	Ef	K	C	S	L	Pr	Ef	K
	1 ST OPTION (chose 1 option of 2)														
DIES5O11	Environmental sanitary engineering	SC	44	2	2	-	-	OE	4						
DIES5O12	Water resources and their protection	SC	80	3	-	2	-	E	6						
DIES6O13	Elements of general technologies and specific pollutants	SC	44							2	-	2	-	E	4
DIES6O14	Environmental quality standards	SC	44							2	-	-	2	OE	4
	2 ND OPTION (chose 1 option of 2)														
DIES5O11	Analytical chemistry	SC	80	3	-	2	-	E	6						
DIES5O12	Green technology	SC	44	2	2	-	-	OE	4						
DIES6O13	Toxic and hazardous waste	SC	44							2	-	2	-	OE	4
DIES6O14	Impact of pollutants on the environment factors	SC	44							2	-	2	2	E	4
	TOTAL S1/S2 (Com. Optional)			5	2	2	-	K10		4	-	2	2	K8	
	TOTAL III RD Year (Com. Optional)			9C+2S+2L+2Pr						2E+2 OE				K18	
	TOTAL COMPULSORY S1/S2			15	2	5	4	K30		14	2	7	3	K30	
	TOTAL COMPULSORY			26						26					
	TOTAL COMPULSORY COURSES III RD Year			29C+4S+12L+7Pr						8E+7 OE				K60	
	ELECTIVE			C	S	L	Pr	Ef	K	C	S	L	Pr	Ef	K
DIES5F01	Refrigeration and air conditioning installations	SC	22	1	1	-	-	OE	2						
DIES5F02	Ecomaterials I	SC	33	2	1	-	-	OE	3						
DIES6F03	Ecomaterials II	SC	31							2	1	-	-	OE	2
DIEC6F04	Introduction to entrepreneurship	CC	47							1	1	-	-	OE	3
	TOTAL ELECTIVE S1/S2									3	2	-	-	K5	
	TOTAL ELECTIVE COURSES II ND Year			6C + 4S						4OE				K10	

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STUDY PLAN
Academic term 2026-2027
IVTH YEAR

Course code	Courses	Course type	S.S./ Sem. (hours)	No. of hours per week and type of assessment											
				I ST semester 14 weeks						II ND semester 14 weeks					
				C	S	L	Pr	Ef	K	C	S	L	Pr	Ef	K
	COMPULSORY IMPOSED														
DIED7O01	Environmental management	DC	80	3	2	-	-	E	6	-	-	-	-	-	-
DIED7O02	Natural Resources	DC	80	2	2	1	-	E	6	-	-	-	-	-	-
DIES7O03	Rivers regularization and damming	DC	66	2	2	-	2	E	6	-	-	-	-	-	-
DIES7O04	Pollutants control I	SC	80	3	-	2	-	E	6	-	-	-	-	-	-
DIES7O05	Diploma project elaboration I	SC	22	-	-	-	2	OE	2	-	-	-	-	-	-
DIES8O06	Diploma project elaboration II	SC	22	-	-	-	-	-	-	-	-	-	2	OE	2
DIED8O07	Technological and biotechnological processes automatisation	DC	33	-	-	-	-	-	-	2	-	-	1	OE	3
DIED8O08	Land improvements	SC	33	-	-	-	-	-	-	3	-	-	2	E	4
DIEF8O09	Non-conventional energies	BC	33	-	-	-	-	-	-	1	2	-	-	OE	3
DIES8O10	Community policy on environmental protection	SC	33	-	-	-	-	-	-	2	1	-	-	E	3
DIED8O11	Technologies with low environmental impact	DC	33	-	-	-	-	-	-	2	-	-	1	E	3
DIES8O12	Pollutants control II	SC	33	-	-	-	-	-	-	2	-	1	-	E	3
DIES8O13	Practical training for diploma project drafting	SC								2 weeks x 6 h / day = 60 h				OE	4
	TOTAL		592	10	4	5	4	-	26	12	1	5	4	-	25
	COMPULSORY OPTIONAL			C	S	L	Pr	Ef	K	C	S	L	Pr	Ef	K
	1 ST OPTION (chose 1 option of 2)														
DIES7A14	Wastewater treatment technologies	SC	58	2	-	-	1	OE	4						
DIES8A15	Decontamination systems	SC	47							1	-	-	1	OE	3
DIES8A16	Integrated waste management	DC	22							1	1	-	-	OE	2
	2 ND OPTION (chose 1 option of 2)														
DIES7A14	Technologies and equipment for atmosphere protection and purification	SC	58	2	-	-	1	OE	4						
DIES8A15	Integrated prevention and control of pollution	SC	22							1	1	-	-	OE	2
DIES8A16	Sustainable rural development and environment protection	SC	47							1	-	-	1	OE	3
	TOTAL S1/S2 (Com. Optional)		127	2	-	-	1	K4	2	1	-	1	K5		
	TOTAL IVTH Year (Com. Optional)			4C+1S+2Pr						2E+2 OE					
	TOTAL COMPULSORY S1/S2			12	6	3	5			14	4	1	7	K30	
	TOTAL COMPULSORY			26						26					
	TOTAL COMPULSORY COURSES IVTH Year			26C+6S+10L+10Pr						8E+8 OE					
	ELECTIVE			C	S	L	Pr	Ef	K	C	S	L	Pr	Ef	K
DIEC7F01	Entrepreneurship - economic and financial aspects	CC	47	1	1	-	-	OE	3						
DIEC8F02	Business management in food engineering	CC	47							1	1	-	-	OE	3
	TOTAL ELECTIVE S1/S2			1	1	-	-			1	1	-	-	K3	
	TOTAL ELECTIVE COURSES IIND Year			2C + 2S						2OE					

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