

Study programme: **Land and Environmental Engineering**

Type of study: **double degree master programme**

Study form: **full time form of study**

Guarantor: **prof. RNDr. Dana Komínková, Ph.D.**

St. year: 1														
Code	Compulsory subjects	1st Semester winter						2nd Semester summer						Guarantee
		Le	Pr	FE	ECTS	Cr	Ex	Le	Pr	FE	ECTS	Cr	Ex	
ZEX121Z	Aquatic Ecosystem Restoration	2	2	-	6	cr	-							Mgr. Bílý, Ph.D.
LRX06E	Environmental Economics	2	1	-	5	cr	Ex							doc. Hájek
ZUX116E	Landscape and Ecological Applications	2	2	1	6	cr	ex							doc. Wimmerová
ZBX111E	Landscape Architecture	2	2	2	6	cr	ex							doc. P. Kumble
ZBX123E	Landscape Planning	2	1	-	6	cr	ex							doc. Janečková
ZUX117E	Strategic Planning and Assessment	2	1	-	4	cr	ex							doc.. Z. Keken
ZVX142E	Climate Change Adaptation							2	2	-	5	cr	Ex	prof. Hanel
ZUX110E	Water Resources Protection							2	2	1	6	cr	ex	prof. Komínková
ZUX104Z	Workshop 1 - Global Environmental Issues *							1	0	-	2	cr	-	Ing. Zdražil, Ph.D.
	Optional subjects				10						15			
Σ		12	9	3	43	6	5	5	4	1	28	3	2	71

A student who completed the subject Workshop 1 - Global Environmental Issues in the bachelor's degree must enroll in an optional subject from the list of optional subjects to supplement the required number of credits.

Le = lecture

Pr = practical lecture

FE = field excursions (days)

ECTS = credits

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Code	Optional subjects I	1st Semester winter						2nd Semester summer						Guarantee
		Le	Pr	FE	ECTS	Cr	Ex	Le	Pr	FE	ECTS	Cr	Ex	
ZVX145E	Air Pollution	2	2	-	6	cr	ex							Mgr. Martínková, Ph.D.
ZUX118E	Applied Statistics for Ecologists	2	2	-	5	cr	ex							doc. Berchová
LRZ001E	Bioeconomy	2	1	-	4	cr	ex							doc. Ing. M. Hájek, Ph.D.
ZUX114E	Drinking and Waste Water Treatment	2	2	-	5	cr	ex							prof. RNDr. D. Komínková
ZUX119E	Emerging Pollutants in the Environment	2	2	-	5	cr	ex							A. Sochacki, Ph.D.
ZVX128E	Environmental Hydrology	2	2	-	6	cr	ex							doc. Ing. P. Máca, Ph.D.
LLX04E	Forest Ecology and Management	2	1	1	5	cr	ex							prof. Ing. M. Svoboda, Ph.D.
ZGX122E	GIS I	2	2	-	5	cr	ex							doc. Ing. V. Moudrý, Ph.D.
ZBX110E	Land Management	2	2	-	6	cr	ex							doc. Ing. K. Janečková, Ph.D.
ZBX116E	Landscape Planning Studio	2	2	-	3	cr	ex							doc. P. Kumble, Ph.D.
ZVX129E	Physico-chemical Aspects of Processes in the Environment	2		-	4	cr	ex							doc. Mgr. M. Vach, Ph.D.
ZBX119E	River Restoration	2	1	2	6	cr	ex							Mgr. Simon, Ph.D.
ZBX124E	Ecological Restoration and Engineering							2	3	5	cr	ex		Mgr. O. Simon, Ph.D.
ZEX117E	Ecosystems Conservation and Management							2	1	1	6	cr	ex	Ing. P. Zasadil, Ph.D.
ZVX153E	Global Change and Water Resources							2	1	-	5	cr	ex	Mgr. M. Martínková, Ph.D.
ZVX133E	Hydrological Modeling							2	2	-	6	cr	ex	doc. Ing. P. Máca, Ph.D.
ZVX132E	Hydrodynamics in Porous Media							2	2	-	6	cr	ex	doc. Ing. M. Kuráž, Ph.D.
ZBX121E	Landscape Ecology							2	2	-	5	cr	ex	doc. P. Kumble, Ph.D.
ZBX104Z	Landscape Planning Studio Workshop									2	3	cr		doc. P. Kumble, Ph.D.
ZUX120E	Management of Invasive and Non-native Species							2	1	-	4	cr	ex	doc. Ing. K. Berchová, Ph.D.
ZUX121E	Nature Based Solutions							2	2	1	6	cr	ex	prof. RNDr. D. Komínková,
ZVX134E	Numerical Methods							2	2	-	6	cr	ex	doc. Ing. M. Kuráž, Ph.D.
ZUX122E	Radioecology							2	-	-	3	cr	ex	Ing. J. Hůlka, CSc. (externista SURO)
ZBX114E	Spatial Planning							2	2	-	5	cr	ex	doc. P. Kumble, Ph.D.
LRZ002E	Valuation of Natural Resources							2	1		5	cr	ex	doc. Ing. M. Hájek, Ph.D.

It is allowed to choose an optional subject if it was not completed in the bachelor's degree.

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St. year: 2

Code	Compulsory subjects	3rd Semester winter						4th Semester summer						Guarantee
		Le	Pr	FE	ECTS	Cr	Ex	Le	Pr	FE	ECTS	Cr	Ex	
	Environmental Hydraulics	3	3	-	9	-	Ex							Assoc. Prof. M.Sc. C. Gualtieri, Ph.D.
	Plants for the Treatment of Aeriform Effluents	4	2	2	9	-	Ex							prof. A. Lancia, Ph.D.
	Advanced Applied Engineering Mathematics							3	3	-	9	Cr	Ex	M.Sc. MR. Mattei, Ph.D.
ZXX131Z	Diploma Thesis Assignment							-	-	-	5	Cr	-	Supervisor
	Energy Management							4	2	-	9	-	Ex	Assoc. Prof. Eng. F. Calise, Ph.D.
	Safety In Chemical Processes							2	2	-	9	-	Ex	prof. R. Andreozzi Ph.D.
	Waste to Energy and Circular Economy							4	2	2	9	Cr	Ex	prof. M.Sc. M. Fabbicino, Ph.D.
Σ		7	5	2	18	0	2	13	9	2	41	3	4	59

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St. year: 2

Code	Optional subjects II	1st Semester winter						2nd Semester summer						Guarantee
		Le	Pr	FE	ECTS	Cr	Ex	Le	Pr	FE	ECTS	Cr	Ex	
	Geographic Information Systems	3	3		9	cr	ex							M.Sc. G. Carpentieri, Ph.D.
	Hydraulics for System Ecodesign	4	2	2	9	cr	ex							prof. M.Sc. A. Carravetta, Ph.D.
	River Hydraulics	4	3	1	9		ex							prof. M.Sc. C. Di Cristo, Ph.D.
	Technologies for a Sustainable Energetic	4	2		9		ex							Assoc. Prof. M.A. A. Erto, Ph.D.
	Wastewater Treatment Plants	4	2	2	9		ex							Assoc. Prof. M.Sc. G. Esposito, Ph.D.
	Applied Environmental Geology							4	2		9	cr	ex	prof. M.Sc. D. Ducci, Ph.D.
	Advanced Technologies for Hydrological Monitoring							3	1	1	6		ex	prof. Eng. S. Manfreda, Ph.D.
	Built Environment							3	2		6	cr	ex	M.Sc. L. Diana, Ph.D.
	Circular Bioeconomy for Ecological Transition							3	1		6	cr	ex	Assoc. Prof. M.Sc. G. Esposito, Ph.D. / M.Sc.
	Coastal Engineering							5	1		9		ex	Eng. M. Buccino, Ph.D.
	Environmental Assessment and Authorisations							4	2		9		ex	prof. M.Sc. A. Cesaro, Ph.D.
	Environmental Monitoring and Air Quality Management							3	1	1	9	cr	ex	Assoc. Prof. Eng. F. Murena, Ph.D.
	Geotechnical Risks in Urban Areas							3	1		6		ex	Assoc. Prof. M.Sc. A. D'Onofrio, Ph.D.
	Laboratory for Road Safety							1	3		6		ex	Eng. F. Galante, Ph.D.
	Mitigation Of Climate Change							5	2		9	cr	ex	M.Sc. S. Papirio, Ph.D.
	Resilience of Geotechnical Systems							3	1		6		ex	Eng. F. De Silva, Ph.D.
	Smart Urban Design							1	3		6	cr	ex	Assoc. Prof. M.Arch. L. Stendardo, Ph.D.
	Smart, Resilient and Sustainable City							3	3		6	cr	ex	Assoc. Prof. M.Sc. R. La Rocca, Ph.D. / M.Sc. F.
	Transport Planning and Appraisal							4	2	2	9	cr	ex	Assoc. Prof. M.Sc. F. Pagliara, Ph.D.

St. year: 3

Code	Compulsory subjects	5th Semester winter												Guarantee
		Le	Pr	FE	ECTS	Cr	Ex							
ZXX134E	Thesis Preparation	-	-	-	15	cr	-							Supervisor
	Optional subjects				5									
Σ		0	0	0	20	0	0							20