CURRICULUM OF THE MASTER PROGRAM (MSC.) IN "ENVIRONMENTAL ENGINEERING AND WATER MANAGEMENT"

No.	Year 1, Semester 1		ECTS	Type of module
	Module	**Courses**		
1	Analytical Methods and Instrumentation	Analytical Methods in Environmental Sciences	3	A
		Instrumental Techniques and Applications	3	A
2	Environmental Modelling and Data Analysis	Advanced statistical methods	3	D
		Research methods in environmental sciences	3	D
3	Environmental management and Risk assessment	Environmental Management in Company	2	A
		Applied environmental impact assessment	2	B
		Environmental risk analysis and management	2	B
4	Soil Science and Biogeochemistry	Biogeochemistry of soil	4	B
		Soil physic	2	B
5	Air Pollution, Climate Change and Ecosystem Dynamics	Air pollution control	3	B
		Climate change scenarios and Ecosystem dynamics	3	B
Year 1, Semester 2				
1	Applied Hydrology and Project Management	Hydrological processes and water resources management	3	B
		Environmental Project Management	3	D
2	Hydraulic engineering and water basin management	Hydraulic engineering and water basin management	6	B
3	Environmental Chemistry and Organic Pollutants	Environmental Chemistry	3	B
		Ecotoxicology of Organic Pollutants	3	B
4	Waste Management and Circular Economy	Waste logistics and Waste technology	3	B
		Circular Economy Policies for Waste Management	3	A
5	Land Management and Soil Remediation	Land policy and land rearrangement	3	B
		Soil Remediation technologies	3	B

SPECIALIZATION (1) WATER MANAGEMENT

No.	Year 2, Semester 1		ECTS	Type of module
	Module	**Courses**		
1	Water Supply, Sanitation and Wastewater Engineering	On site solutions for water supply and sanitation	3	B
		Planning and design in water supply and wastewater treatment	3	B
2	Water Policy and Aquatic Ecosystems Biomonitoring	Water Legislation and EU Water Framework Directive	3	B
		Aquatic Ecosystems Biomonitoring and Assessment	3	B
3	River Dynamics and Flood Risk Management	Sediment regime and river morphology	3	B
		Integrated flood risk management	3	B
4	Elective module		6	C
5	Elective module		6	C
Year 2, Semester 2				
1	Diploma Thesis	Diploma Thesis Seminars	2	E
		Diploma Thesis	28	E

SPECIALIZATION (2) NATURAL RESOURCES MANAGEMENT

No	Year 2, Semester 1		ECTS	Type of module
	Module	**Courses**		
1	Environmental Microbiology and Conservation Genetics	Applied Environmental microbiology	3	B
		Conservation biogeography and genetics	3	B
2	Soil Fertility and Contaminated Land Management	Soil Fertility and food security	3	B
		Contaminated sites and soil protection	3	B
3	Water Management and Groundwater Hydrology	Advanced Rural water management	3	B
		Groundwater Hydrology	2	B
4	Elective module		6	C
5	Elective module		6	C
Year 2, Semester 2				
1	Diploma Thesis	Diploma Thesis Seminars	2	E
		Diploma Thesis	28	E

Electictive Modules for two specializations (1) Water Management and (2) Natural Resources Management

No	Module	Courses	ECTS	Type of module
1	Hydrogeology and Field Applications	Hydrogeology	4	C
		Field trip hydrology and water management	2	C
2	Spatial Planning and landscape management	Integrated landscape management	3	C
		Spatial planning: legal and planning instruments	3	C
3	Soil and industrial water management	Soil water management	3	C
		Industrial water management	3	C
4	Soil and Water Conservation Engineering	Soil and water bioengineering: principles and applications	3	C
		Soil erosion models and their application	3	C
5	Aquatic ecology and Limnology	Ecology of aquatic environments	3	C
		Limnology	3	C
6	Global Change and Water Systems	Global change ecology	3	C
		Impacts of climate change on water resources	3	C
7	Biomonitoring and Soil Microbial Ecology	Environmental Biomonitoring	3	C
		Molecular microbial ecology of soils	3	C
8	Environmental Policy and waste management systems	Environmental policies	3	C
		Planning and assessment of waste management systems	3	C
9	Sustainable Energy and Life Cycle Management	Sustainable Energy Systems	4	C
		Life cycle management	2	C
10	Soil Analysis and Laboratory Techniques	Methods of soil analysis	3	C
		Soil chemistry laboratory	3	C
11	Smart Geospatial Technologies in Environmental Sciences	Remote sensing and GIS in Environmental Sciences	3	C
		Application of Smart Technologies in Environmental Sciences	3	C
12	Waste Chemistry and Bioprocesses	Chemistry and analysis of waste	3	C
		Environmental bioprocess engineering	3	C
13	Environmental Economics and Game Theory	Natural Resource and Environmental Economics	3	A
		Game theory in environmental and natural resource management	3	D