

Faculty Environmental nad Mechanical Engineering

STUDY CURRICULUM

Course: Environmental Engineering and Protection

Subject/module	Number of ECTS credits	Number of hours						asses-ment <sup>3</sup>	Department/Institute
		Total (4+5+6+7+8)	teaching hours			contact hours	ESW <sup>2</sup>		
			lectures	pract. classes	others <sup>1</sup>				
1	2	3	4	5	6	7	8	9	11
<b>semester 1</b>									
<b>student's choice course 1</b>	3	77	10	10	0	25	32	EX	Department of Ecology and Environmental protection
Soil science and classification, Gleboznastwo i systematyka gleb	3	75	10	10	0	25	30	GA	Department of Soil Science and Land Reclamation
Environmental chemistry, Chemia środowiska	3	90	15	15	0	25	35	EX	Department of Soil Science and Land Reclamation
<b>student's choice course 2</b>	2	50	15	0	0	20	15	GA	Department of Ecology and Environmental Protection/Department of Hydraulic and Sanitary Engineering
New trends in civil engineering, Tendencje rozwojowe w budownictwie	5	125	30	30	0	30	35	EX	Department of Construction and Geoengineering
Statistical analysis of environmental processes, Analiza statystyczna procesów środowiskowych	4	100	15	15	0	25	45	EX	Department of Construction and Geoengineering
<b>student's choice course 3</b>	3	85	15	15	0	20	35	GA	Department of Ecology and Environmental protection
Introduction seminar, Seminarium wstępne	4	110	0	15	0	25	70	GA	Department of Construction and Geoengineering
total semester 1	27	712	110	110	0	195	297		

**semester 2**

Climate change and its consequences, Zmiany klimatyczne i ich konsekwencje	3	78	14	14	0	25	25	EX	Department of Construction and Geoengineering
<b>student's choice course 4</b>	4	105	15	30	0	25	35	GA	Department of Land Improvement, Environmental Development and Geodesy
Wetland conservation, Ochrona mokradeł	3	78	14	14	0	25	25	GA	Department of Ecology and Environmental Protection
<b>student's choice course 5</b>	3	75	10	10	0	25	30	GA	Department of Ecology and Environmental Protection
<b>student's choice course 6</b>	3	85	15	30	0	20	20	EX	Department of Ecology and Environmental Protection
<b>student's choice course 7</b>	3	313	15	15	0	25	258	EX	Department of Hydraulic and Sanitary Engineering
Field trip (5 days), Zajęcia terenowe	6	150	0	0	40	35	75	GA	Department of Ecology and Environmental Protection
Graduate seminar, Seminarium	4	109	0	14		25	70	GA	Department of Construction and Geoengineering
total semester 2	29	993	83	127	40	205	538		Department of Hydraulic and Sanitary Engineering
<b>semester 3</b>									
On-site wastewater treatment systems, Przydomowe oczyszczalnie ścieków	4	107	14	28	0	30	35	EX	Department of Hydraulic and Sanitary Engineering
<b>student's choice course 8</b>	5	125	15	30	0	35	45	EX	Department of Land Improvement, Environmental Development and Geodesy
Biodiversity analyses, Bioróżnorodność	3	78	14	14	0	25	25	GA	Department of Ecology and Environmental Protection/Institute of Zoology/Department of Grasslands
<b>student's choice course 9</b>	3	78	14	14	0	25	25	GA	Department of Agricultural Chemistry and Environmental Biogeochemistry
Biological monitoring, Monitoring biologiczny	3	75	15	15	0	25	20	GA	Department of Ecology and Environmental Protection

<b>student's choice course 10</b>	3	93	14	14	0	30	35	GA	Department of Hydraulic and Sanitary Engineering
<b>student's choice course 11</b>	3	75	15	15		20	25	EX	Department of Ecology and Environmental Protection
Graduate seminar, Seminarium	4	109	0	14	0	25	70	GA	Department of Construction and Geoengineering
<b>total semester 3</b>	<b>28</b>	<b>740</b>	<b>101</b>	<b>144</b>	<b>0</b>	<b>215</b>	<b>280</b>		
<b>semester 4</b>									
Fundamentals of land improvement, Podstawy melioracji i systemy odwadniająca	3	80	15	15	0	25	25	EX	Department of Land Improvement, Environmental Development and Geodesy
<b>student's choice course 12</b>	3	75	15	15	0	20	25	GA	Department of General and Environmental Microbiology
Soil and groundwater remediation, Remediacja i ochrona gleb	3	75	10	15	0	25	25	GA	Department of Soil Science and Land Reclamation
Graduate seminar, Seminarium	5	145	0	30	0	30	85	GA	Department of Ecology and Environmental Protection
Master thesis	22	600	0	0	0	200	400	<b>assessed by Faculty office</b>	
<b>total semester 4</b>	<b>36</b>	<b>975</b>	<b>40</b>	<b>75</b>	<b>0</b>	<b>300</b>	<b>560</b>		
<b>MSc course total</b>	<b>120</b>	<b>3420</b>	<b>334</b>	<b>456</b>	<b>40</b>	<b>915</b>	<b>1675</b>		

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<sup>1</sup> any activities other than conversatory, laboratory or design classes (e.g. siite visits, case ctudy visits, excursions and others)

<sup>2</sup> EX - examination; GA - graded assignment

<sup>3</sup> ESW - estimated number of student work hours

#### Student's choice courses

Course 1	Sustainable development and environmental management Zrównoważony rozwój i zarządzanie środowiskiem
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	Environmental Impact Assessment Oceny oddziaływania na środowisko
Course 2	Ecotoxicology Ekotoksykologia
	Ecotoxicological assessment of environment Ekotoksykologiczna ocena środowiska
Course 3	Environmental protection of rural areas, Ochrona środowiska na obszarach wiejskich
	Mine waters in environment, Wody kopalniane w środowisku
Course 4	Application of GIS in Hydrology and Water Resource Management, GIS w hydrologii i gospodarce wodnej
	Remote Sensing in Hydrology and Water Resource Management, Teledetekcja w hydrologii i gospodarce wodnej
Course 5	Applied ecology and nature resources management, Ekologia stosowana i ochrona zasobów środowiska
	Ecological aspect of nature protection, Ekologiczny aspekt ochrony przyrody
Course 6	Freshwater ecosystems and their restoration, Ekosystemy wód śródlądowych - funkcjonowanie i ochrona
	River restoration, Renaturyzacja rzek
Course 7	Engineering Hydrology, Hydrologia Inżynierska
	Hydrological Processes, Procesy Hydrologiczne

Course 8	Spatial planning, Planowanie przestrzenne
	Integrated Development Planning, Zintegrowane planowanie rozwoju
Course 9	Wastes Recycling and Management, Recykling i Zagospodarowanie Odpadów
	Agrochemistry and xenobiotics, Agrochemia i Ksenobiotyki
Course 10	Environmetal Fluid Mechanics, Przyrodnicze aspekty mechaniki płynów
	Free Surface Flows, Przepływy ze Swobodną Powierzchnią
Course 11	Lake recultivation, Rekultywacja jezior
	Technics of water bodies recovery, Techniki odnowy zbiorników wodnych
Course 12	Environmental biotechnology, Biotechnologia środowiskowa
	Microorganisms in plant and soil protection, Mikroorganizmy w ochronie roślin i gleby