COURSE CATALOGUE
(ECTS INFORMATION PACKAGE)

ENVIRONMENT PROTECTION
FIRST-CYCLE STUDIES

Legnica 2011/2012

Field: Environment protection

The graduates of first grade engineering studies in field of Environment Protection possess general knowledge of mathematics, natural science related to technology, agriculture and forestry and know how to implement this knowledge in their professional life as well as to apply legal and ethical standards. They can understand and analyze processes occurring in nature and the influence of a human being on the environment. They know primary technological, agricultural and forestry issues essential for environment protection and follow the rules of balanced development. The graduates are able to take an active part in group work, have the ability to manage teamwork and make use of professional reference literature. The graduates know basic technological processes – especially environmentally friendly processes, and are skilled to perform laboratory works and organize safe and effective workplaces. To complement their specialist knowledge students of Environment Protection learn a foreign language at the Council of Europe level B2 with special regard to specialized vocabulary of environmental issues. The graduates are prepared to work in scientific laboratories, institutions of supervision and environment protection as well as in industry, agriculture, fine production, health care institutions, administration and education – after having completed specialization of teacher training (according to regulations of teacher training education). The graduates are ready to start second grade studies.

Within the field of Environment Protection students can learn, apart from the ones described above, additional skills and abilities. The specializations are as follows:

Systems of Environment Protection

Within this specialization there are complex studies preparing students for implementation and exploitation of different methods and systems that reduce negative influence of a human being on the environment, as well as the ones that let the affected and transferred elements and environmental areas return to their primary function and improve their condition. The aim of this specialization is to educate graduates that are skilled to make decisions at different levels: communal, regional and national. They are trained for planning monitoring of natural environment, computer processing and analyzing information applying mathematical techniques and multi-criteria analysis.

The graduates of the specialization of Systems of Environment Protection are prepared for designing and supervising environment friendly technologies including wasteless ones. They can evaluate harmfulness of technologies, both used and newly implemented, on the environment. They know technologies of removing and neutralizing of industrial gas, liquid and solid waste and are familiar with water-sewage management.

Protection and Rehabilitation of Degradated Areas

Within this specialization there are complex studies preparing students for implementation and exploitation of different methods and systems that reduce negative influence of a human being on the environment, as well as the ones that let the affected and transferred elements and environmental areas return to their primary function and improve their condition. There is a special emphasis and focus on best available techniques for direct or indirect protection of environment and rehabilitation of areas degradated by a human activity.

The aim of this specialization is to educate graduates that are skilled to make decisions at different levels: communal, regional and national. They are trained for planning monitoring of natural environment, computer processing and analyzing information applying mathematical techniques and multi-criteria analysis used particularly for rehabilitating degradated areas.

The graduates of the specialization of Protection and Rehabilitation of Degradated Areas are prepared for designing and supervising environment friendly technologies including wasteless ones. They know kinds of degradation of environment with particular focus on degradation of soil. They can use various methods of rehabilitating soil – biological, chemical and technical ones, with particular emphasis on mining areas. They can evaluate harmfulness of technologies, both used and newly implemented, on the environment. They know technologies of removing and neutralizing of industrial gas, liquid and solid waste and are familiar with water-sewage management.

The graduate of the first grade studies in the field of Environment Protection in specialization of **Systems of Environment Protection** and **Protection and rehabilitation of Degradated Areas** is granted a title of an *Inżynier*[1].

[1] Polish equivalent of Bacholor of Science (BSc)

Admission requirements

The minimum requirement for admission to the degree program is the secondary school graduation certificate or an equivalent foreign document confirmed by the Polish education authorities. During the admission procedure the results in mathematics, foreign language and one of the selected subjects: Polish, biology, chemistry or physics (physics and astronomy) from that certificate are taken into account.

Final examination

The diploma examination is an oral examination. During the examination the student should demonstrate a general understanding of field/specialization and the knowledge related to the dissertation.
The rules determining the final result of the studies are described in The Rules of Study at The Witelon University of Applied Sciences in Legnica. The final result is the sum of: 0,6 of the arithmetical mean of all the grades achieved during the study, 0,2 of the grade for the diploma thesis and 0,2 of the grade for the final exam.

Examination and assessment regulations

General examination and assessment regulations are described in detail in The Rules of Study at The Witelon University of Applied Sciences in Legnica. Assessment methods of individual courses are given in the programs of these courses.

ECTS departmental coordinator

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Major: Environment protection
Specialization: Systems of environment protection, **Stationary**
Recruitment: 2011

Year I

No.	Course	Number of hours	1st semester					ECTS	2nd Semester					ECTS	Form of credit
			lc	c	lb	p	s		lc	c	lb	p	s		
Subjects of general education															
1	Information Technology	60	15		45			2							grade
2	Economics	60	30	30				3							grade
3	Protection of Intelectual Property	30							30					2	grade
4	Foreign Language	30								30				1	grade
Basic subjects															
5	Mathematics	90	45	45				6							exam
6	Biology	60	30		30			7							exam
7	Chemistry	60	30		30			7							exam
8	Physics	60	30		30			5							exam
9	Microbiology	60							30		30			7	exam
10	Biochemistry	60							30		30			7	exam
Main subjects															
11	Ecology	90							30		30		30	6	exam
12	Organisation of Environmental Protection and Its Legal Basis	60							30	30				3	grade
13	Basics of Geology and Geomorphology	60							30	30				4	grade
Total number of hours:			**180**	**75**	**135**	**0**	**0**		**180**	**90**	**90**	**0**	**30**		
Total number of hours in a semester:		**780**	**390**					**30**	**390**					**30**	
Number of exams:		**7**	**4**						**3**						

Industrial Safety – I semester 4h
Library training - I semester 4h

Major: Environment protection
Specialization: Systems of environment protection, **Stationary**
Recruitment: 2011

Year II

No.	Course	Number of hours	3rd semester						ECTS	4th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Foreign Langauge	90		30					1		60					3	grade, exam
2	Physical Education	60		30					0		30					0	credit
Main subjects																	
3	Nature Protection	75	30	30				15	6								exam
4	Geology and Geomorphology	60	30				30		5								exam
5	Soil Studies	75	30		30			15	6								exam
6	Technology of Environmental Renewal	75								30			30		15	7	exam
7	Climatology and Meteorology	60								30				30		6	exam
8	Hydrology and Water Management	60								30				30		5	exam
Subjects for speciality																	
9	Chemistry of Environment	60	30		30				3								grade
10	Monitoring of Environment	60	30					30	3								grade
11	Environmental Health Dangers	60	30	30					3								grade
12	Geo-Engineering of Environment	60	30	30					3								grade
13	Law of Environment Protection	60								30	30					4	grade
14	Economics in Environment Protection	60								30	30					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**210**	**150**	**60**	**0**	**30**	**60**		**150**	**150**	**0**	**30**	**60**	**15**		
Total number of hours in a semester:		**915**	**510**						**30**	**405**						**30**	
Number of exams:		**7**	**3**							**4**							

Major: Environment protection
Specialization: Systems of environment protection, **Stationary**
Recruitment: 2011

Year III

No.	Course	Number of hours	5th semester						ECTS	6th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Industrial Safety and Basics of Ergonomics	30	30						3								grade
Main subjects																	
2	Process Engineering	60	30	30					7								exam
3	Bio-Energetic Processes	60	30	30					7								exam
4	Diploma Seminar	45					15		1					30		3	grade
5	Waste Management	90								30			30		30	8	exam
Subjects for speciality																	
6	Bio-Technology of Environment	60	30	30					4								grade
7	Water and Sewage Systems	60	30	30					4								grade
8	Civilizational Dangers and Balanced Development	60	30				30		4								grade
9	System of Atmosphere Protectiojn	75								30	30				15	6	exam
10	Systems of Atmosphere and Lithosphere Protectiojn	75								15	30		30		15	8	exam
11	Diaphragm Processes in Environment Protection	45								15	30					7	exam
12	Cartography with Elements of Geodetic Surveying	30									30					4	credit
13	Traineeship	4 weeks														0	credit
Total number of hours:			**180**	**120**	**0**	**0**	**45**	**0**		**60**	**90**	**0**	**60**	**30**	**45**		
Total number of hours in a semester:		**630**	**345**						**30**	**285**						**30**	
Number of exams:		**4**	**2**							**2**							

Year IV

No.	Course	Number of hours	Semestr 7						ECTS	Form of credit
			lc	c	lb	p	s	t		
Main subjects										
1	Diploma Seminar	30					30		3	grade
Subjects for speciality										
2	Rehabilitation of Degradated Areas	75	30	30				15	7	exam
3	Management of Environment in Administration and Economic Entities	70	10	30		30			5	exam
4	Preparation of a Diploma Thesis and Exam Revision	own work							15	grade
Total number of hours:			**40**	**60**	**0**	**30**	**0**	**15**		
Total number of hours in a semester:		**175**	**345**						**30**	
Number of exams:		**2**	**2**							

Major: Environment protection
Specialization: Systems of environment protection , **Non- stationary**
Recruitment: 2011

Year I

No.	Course	Number of hours	1st semester					ECTS	2nd semester					ECTS	Form of credit
			lc	c	lb	p	s		lc	c	lb	p	s		
Subjects of general education															
1	Information Technology	30	15		15			2							grade
2	Economics	60	30	30				3							grade
3	Protection of Intelectual Property	30							30					2	grade
4	Foreign Language	30								30				1	grade
Basic subjects															
5	Mathematics	90	45	45				6							exam
6	Biology	60	30		30			7							exam
7	Chemistry	60	30		30			7							exam
8	Physics	60	30		30			5							exam
9	Microbiology	60							30		30			7	exam
10	Biochemistry	60							30		30			7	exam
Subjects for speciality															
11	Ecology	60							20		20		20	6	exam
12	Organisation of Environmental Protection and Its Legal Basis	40							20	20				3	grade
13	Basics of Geology and Geomorphology	40							20		20			4	grade
Total number of hours:			**180**	**75**	**105**	**0**	**0**		**130**	**50**	**100**	**0**	**20**		
Total number of hours in a semester:		**780**	**360**					**30**	**300**					**30**	
Number of exams:		**7**	**4**						**3**						

Industrial Safety – I semester 4h
Library training - I semester 4h

Major: Environment protection
Specialization: Systems of environment protection , **Non-stationary**
Recruitment: 2011

Year II

No.	Course	Number of hours	3rd semester						ECTS	4th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Foreign Langauge	90		30					1		60					3	grade, exam
Main subjects																	
3	Nature Protection	60	30	30					6								exam
4	Geology and Geomorphology	40	20		20				5								exam
5	Soil Studies	60	20		30			10	6								exam
6	Technology of Environmental Renewal	50								20			20		10	7	exam
7	Climatology and Meteorology	40								20				20		6	exam
8	Hydrology and Water Management	40								20				20		6	exam
Subjects for speciality																	
9	Chemistry of Environment	40	20		20				3								grade
10	Monitoring of Environment	40	20					20	3								grade
11	Environmental Health Dangers	40	20	20					3								grade
12	Geo-Engineering of Environment	40	20	20					3								grade
13	Law of Environment Protection	40								20	20					4	grade
14	Economics in Environment Protection	40								20	20					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**150**	**100**	**70**	**0**	**0**	**30**		**100**	**100**	**0**	**20**	**40**	**10**		
Total number of hours in a semester:		**620**	**350**						**30**	**270**						**30**	
Number of exams:		**7**	**3**							**4**							

Major: Environment protection
Specialization: Systems of environment protection , **Non-stationary**
Recruitment: 2011

Year III

No.	Course	Number of hours	5th semester						ECTS	6th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Industrial Safety and Basics of Ergonomics	10	10						3								grade
Main subjects																	
2	Process Engineering	40	20	20					7								exam
3	Bio-Energetic Processes	40	30	30					7								exam
4	Diploma Seminar	30					10		1					20		3	grade
5	Waste Management	80								20			30		30	8	exam
Subjects for speciality																	
6	Bio-Technology of Environment	40	20	20					4								grade
7	Water and Sewage Systems	40	20	20					4								grade
8	Civilizational Dangers and Balanced Development	40	20				20		4								grade
9	Systems of Atmosphere and Lithosphere Protectiojn	60								10	20		20		10	8	exam
10	Diaphragm Processes in Environment Protection	30								10	20					7	exam
11	Cartography with Elements of Geodesy and Cost Estimation	20									20					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**110**	**80**	**0**	**0**	**30**	**0**		**40**	**60**	**0**	**50**	**20**	**40**		
Total number of hours in a semester:		**450**	**220**						**30**	**210**						**30**	
Number of exams:		**5**	**2**							**3**							

Year IV

No.	Course	Number of hours	7th Semester						ECTS	Form of credit
			lc	c	lb	p	s	t		
Main subjects										
1	Diploma Seminar	20					20		3	grade
Subjects for speciality										
2	Rehabilitation of Degradated Areas	40	10	20				10	7	exam
3	Documentation of Environmental Protection Processes in Administration	50	10	20		20			5	exam
4	Preparation of a Diploma Thesis and Exam Revision	own work							15	grade
Total number of hours:			**20**	**40**	**0**	**20**	**20**	**10**		
Total number of hours in a semester:		**110**	**110**						**30**	
Number of exams:		**0**	**2**							

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Stationary**
Recruitment: 2011

Year I

No.	Course	Number of hours	1st semester					ECTS	2nd semester					ECTS	Form of credit
			lc	c	lb	p	s		lc	c	lb	p	s		
Subjects of general education															
1	Information Technology	60	15		45			2							grade
2	Economics	60	30	30				3							grade
3	Protection of Intelectual Property	30							30					2	grade
4	Foreign Language	30								30				1	grade
Basic subjects															
5	Mathematics	90	45	45				6							exam
6	Biology	60	30		30			7							exam
7	Chemistry	60	30		30			7							exam
8	Physics	60	30		30			5							exam
9	Microbiology	60							30		30			7	exam
10	Biochemistry	60							30		30			7	exam
Subjects for speciality															
11	Ecology	90							30		30		30	6	exam
12	Organisation of Environmental Protection and Its Legal Basis	60							30	30				3	grade
13	Basics of Geology and Geomorphology	60							30		30			4	grade
Total number of hours:			**180**	**75**	**135**	**0**	**0**		**180**	**60**	**120**	**0**	**30**		
Total number of hours in a semester:		**780**	**390**					**30**	**390**					**30**	
Number of exams:		**7**	**4**						**3**						

Industrial Safety – I semester 4h
Library training - I semester 4h

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Stationary**
Recruitment: 2011

Year II

No.	Course	Number of hours	3rd semester						ECTS	4th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Foreign Langauge	90		30					1		60					3	grade, exam
2	Physical Education	60		30					0		30					0	credit
Main subjects																	
3	Nature Protection	75	30	30				15	6								exam
4	Geology and Geomorphology	60	30				30		5								exam
5	Soil Studies	75	30		30			15	6								exam
6	Technology of Environmental Renewal	75								30			30		15	7	exam
7	Climatology and Meteorology	60								30				30		6	exam
8	Hydrology and Water Management	60								30				30		6	exam
Subjects for speciality																	
9	Chemistry of Environment	60	30		30				3								grade
10	Monitoring of Environment	60	30					30	3								grade
11	Environmental Health Dangers	60	30	30					3								grade
12	Geo-Engineering of Environment	60	30	30					3								grade
13	Law of Environment Protection	60								30	30					4	grade
14	Economics in Environment Protection	60								30	30					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**210**	**150**	**90**	**0**	**0**	**60**		**150**	**150**	**0**	**30**	**60**	**15**		
Total number of hours in a semester:		**915**	**510**						**30**	**405**						**30**	
Number of exams:		**7**	**3**							**4**							

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Stationary**
Recruitment: 2011

Year III

No.	Course	Number of hours	5th semester						ECTS	6th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Industrial Safety and Basics of Ergonomics	30	30						3								grade
Main subjects																	
2	Process Engineering	60	30	30					7								exam
3	Bio-Energetic Processes	60	30	30					7								exam
4	Diploma Seminar	45					15		1					30		3	grade
5	Waste Management	90								30			30		30	8	exam
Subjects for speciality																	
6	Legal Aspects of Land Protection and Rehabilitation	60	30	30					4								grade
7	Monitoring of Environment on Degradated Areas	60	30	30					4								grade
8	Civilizational Dangers and Balanced Development	60	30				30		4								grade
9	Stocktaking and Designing Rehabilitation of Degradated Areas	75									30		30		15	8	exam
10	Rehabilitation of Degradated Areas I	60								30	30					7	exam
11	Cartography with Elements of Geodesy and Cost Estimation	30									30					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**180**	**120**	**0**	**0**	**45**	**0**		**60**	**90**	**0**	**60**	**30**	**45**		
Total number of hours in a semester:		**630**	**345**						**30**	**285**						**30**	
Number of exams:		**5**	**2**							**3**							

Year IV

No.	Course	Number of hours	7th Semester						ECTS	Form of credit
			lc	c	lb	p	s	t		
Main subjects										
1	Diploma Seminar	30					30		3	grade
Subjects for speciality										
2	Rehabilitation of Degradated Areas II	75	30	30				15	7	exam
3	Documentation of Environmental Protection Processes in Administration	70	10	30		30			5	exam
4	Preparation of a Diploma Thesis and Exam Revision	own work							15	grade
Total number of hours:			**40**	**60**	**0**	**30**	**30**	**15**		
Total number of hours in a semester:		**175**	**175**						**30**	
Number of exams:		**2**	**2**							

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Non-stationary**
Recruitment: 2011

Year I

No.	Course	Number of hours	1st semester					ECTS	2nd semester					ECTS	Form of credit
			lc	c	lb	p	s		lc	c	lb	p	s		
Subjects of general education															
1	Information Technology	30	15		15			2							grade
2	Economics	60	30	30				3							grade
3	Protection of Intelectual Property	10							10					2	grade
4	Foreign Language	30								30				1	grade
Basic subjects															
5	Mathematics	90	45	45				6							exam
6	Biology	60	30		30			7							exam
7	Chemistry	60	30		30			7							exam
8	Physics	60	30		30			5							exam
9	Microbiology	60							30		30			7	exam
10	Biochemistry	60							30		30			7	exam
Subjects for speciality															
11	Ecology	60							20		20		20	6	exam
12	Organisation of Environmental Protection and Its Legal Basis	40							20	20				3	grade
13	Basics of Geology and Geomorphology	40							20		20			4	grade
Total number of hours:			**180**	**75**	**105**	**0**	**0**		**130**	**50**	**100**	**0**	**20**		
Total number of hours in a semester:		**660**	**360**					**30**	**300**					**30**	
Number of exams:		**7**	**4**						**3**						

Industrial Safety – I semester 4h
Library training - I semester 4h

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Non-stationary**
Recruitment: 2011

Year II

No.	Course	Number of hours	3rd semester						ECTS	4th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Foreign Langauge	90		30					1		60					3	grade, exam
Main subjects																	
2	Nature Protection	60	30	30					6								exam
3	Geology and Geomorphology	40	20		20				5								exam
4	Soil Studies	60	20		30			10	6								exam
5	Technology of Environmental Renewal	50								20			20		10	7	exam
6	Climatology and Meteorology	40								20				20		6	exam
7	Hydrology and Water Management	40								20				20		6	exam
Subjects for speciality																	
8	Chemistry of Environment	40	20		20				3								grade
9	Monitoring of Environment	40	20					20	3								grade
10	Environmental Health Dangers	40	20	20					3								grade
11	Geo-Engineering of Environment	40	20	20					3								grade
12	Law of Environment Protection	40								20	20					4	grade
13	Economics in Environment Protection	40								20	20					4	grade
14	Traineeship	4 weeks														0	credit
Total number of hours:			**150**	**100**	**70**	**0**	**0**	**30**		**100**	**100**	**0**	**20**	**40**	**10**		
Total number of hours in a semester:		**620**	**350**						**30**	**270**						**30**	
Number of exams:		**7**	**3**							**4**							

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Non-stationary**
Recruitment: 2011

Year III

No.	Course	Number of hours	5th semester						ECTS	6th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Industrial Safety and Basics of Ergonomics	10	10						3								grade
Main subjects																	
2	Process Engineering	40	20	20					7								exam
3	Bio-Energetic Processes	40	20	20					7								exam
4	Diploma Seminar	30					10		1					20		3	grade
5	Waste Management	80								20			30		30	8	exam
Subjects for speciality																	
6	Legal Aspects of Land Protection and Rehabilitation	40	20	20					4								grade
7	Monitoring of Environment on Degradated Areas	40	20	20					4								grade
8	Civilizational Dangers and Balanced Development	40	20				20		4								grade
9	Stocktaking and Designing Rehabilitation of Degradated Areas	50									20		20		10	8	exam
10	Rehabilitation of Degradated Areas I	40								20	20					7	exam
11	Cartography with Elements of Geodesy and Cost Estimation	20									20					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**110**	**80**	**0**	**0**	**30**	**0**		**40**	**60**	**0**	**50**	**20**	**40**		
Total number of hours in a semester:		**450**	**220**						**30**	**210**						**30**	
Number of exams:		**5**	**2**							**3**							

Year IV

No.	Course	Number of hours	7th Semester						ECTS	Form of credit
			lc	c	lb	p	s	t		
Main subjects										
1	Diploma Seminar	20					20		3	grade
Subjects for speciality										
2	Rehabilitation of Degradated Areas II	50	20	20				10	7	exam
3	Documentation of Environmental Protection Processes in Administration	40		20		20			5	exam
4	Preparation of a Diploma Thesis and Exam Revision	own work							15	grade
Total number of hours:			**20**	**40**	**0**	**20**	**20**	**10**		
Total number of hours in a semester:		**110**	**110**						**30**	
Number of exams:		**2**	**2**							

Major: Environment protection
Specialization: Systems of environment protection, **Stationary**
Recruitment: 2010

Year I

No.	Course	Number of hours	1st semester					ECTS	2nd Semester					ECTS	Form of credit
			lc	c	lb	p	s		lc	c	lb	p	s		
Subjects of general education															
1	Information Technology	60	15		45			2							grade
2	Economics	60	30	30				3							grade
3	Protection of Intelectual Property	30							30					2	grade
4	Foreign Language	30								30				1	grade
Basic subjects															
5	Mathematics	90	45	45				6							exam
6	Biology	60	30		30			7							exam
7	Chemistry	60	30		30			7							exam
8	Physics	60	30		30			5							exam
9	Microbiology	60							30		30			7	exam
10	Biochemistry	60							30		30			7	exam
Main subjects															
11	Ecology	90							30		30		30	6	exam
12	Organisation of Environmental Protection and Its Legal Basis	60							30	30				3	grade
13	Basics of Geology and Geomorphology	60							30		30			4	grade
Total number of hours:			**180**	**75**	**135**	**0**	**0**		**180**	**60**	**120**	**0**	**30**		
Total number of hours in a semester:		**780**	**390**					**30**	**390**					**30**	
Number of exams:		**7**	**4**						**3**						

Industrial Safety – I semester 4h
Library training - I semester 4h

Major: Environment protection
Specialization: Systems of environment protection, **Stationary**
Recruitment: 2010

Year II

No.	Course	Number of hours	3rd semester						ECTS	4th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Foreign Langauge	90		30					1		60					3	grade, exam
2	Physical Education	60		30					0		30					0	credit
Main subjects																	
3	Nature Protection	75	30	30				15	6								exam
4	Geology and Geomorphology	60	30		30				5								exam
5	Soil Studies	75	30		30			15	6								exam
6	Technology of Environmental Renewal	75								30			30		15	7	exam
7	Climatology and Meteorology	60								30				30		6	exam
8	Hydrology and Water Management	60								30				30		6	exam
Subjects for speciality																	
9	Chemistry of Environment	60	30		30				3								grade
10	Monitoring of Environment	60	30					30	3								grade
11	Environmental Health Dangers	60	30	30					3								grade
12	Geo-Engineering of Environment	60	30	30					3								grade
13	Law of Environment Protection	60								30	30					4	grade
14	Economics in Environment Protection	60								30	30					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**210**	**150**	**90**	**0**	**0**	**60**		**150**	**150**	**0**	**30**	**60**	**15**		
Total number of hours in a semester:		**915**	**510**						**30**	**405**						**30**	
Number of exams:		**7**	**3**							**4**							

Major: Environment protection
Specialization: Systems of environment protection, **Stationary**
Recruitment: 2010

Year III

No.	Course	Number of hours	5th semester						ECTS	6th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Industrial Safety and Basics of Ergonomics	30	30						3								grade
Main subjects																	
2	Process Engineering	60	30	30					7								exam
3	Bio-Energetic Processes	60	30	30					7								exam
4	Diploma Seminar	45					15		1					30		3	grade
5	Waste Management	90								30			30		30	8	exam
Subjects for speciality																	
6	Bio-Technology of Environment	60	30	30					4								grade
7	Water and Sewage Systems	60	30	30					4								grade
8	Civilizational Dangers and Balanced Development	60	30				30		4								grade
9	Systems of Atmosphere and Lithosphere Protectiojn	90								15	30		30		15	8	exam
10	Diaphragm Processes in Environment Protection	45								15	30					7	exam
11	Cartography with Elements of Geodetic Surveying	30									30					4	credit
15	Traineeship	4 weeks														0	credit
Total number of hours:			**180**	**120**	**0**	**0**	**45**	**0**		**60**	**90**	**0**	**60**	**30**	**45**		
Total number of hours in a semester:		**630**	**345**						**30**	**285**						**30**	
Number of exams:		**4**	**2**							**2**							

Year IV

No.	Course	Number of hours	Semestr 7						ECTS	Form of credit
			lc	c	lb	p	s	t		
Main subjects										
1	Diploma Seminar	30					30		3	grade
Subjects for speciality										
2	Rehabilitation of Degradated Areas	75	30	30				15	7	exam
3	Management of Environment in Administration and Economic Entities	70	10	30		30			5	exam
4	Preparation of a Diploma Thesis and Exam Revision	own work							15	grade
Total number of hours:			**40**	**60**	**0**	**30**	**0**	**15**		
Total number of hours in a semester:		**175**	**345**						**30**	
Number of exams:		**2**	**2**							

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Stationary**
Recruitment: 2010

Year I

No.	Course	Number of hours	1st semester					ECTS	2nd semester					ECTS	Form of credit
			lc	c	lb	p	s		lc	c	lb	p	s		
Subjects of general education															
1	Information Technology	60	15		45			2							grade
2	Economics	60	30	30				3							grade
3	Protection of Intelectual Property	30							30					2	grade
4	Foreign Language	30								30				1	grade
Basic subjects															
5	Mathematics	90	45	45				6							exam
6	Biology	60	30		30			7							exam
7	Chemistry	60	30		30			7							exam
8	Physics	60	30		30			5							exam
9	Microbiology	60							30		30			7	exam
10	Biochemistry	60							30		30			7	exam
Subjects for speciality															
11	Ecology	90							30		30		30	6	exam
12	Organisation of Environmental Protection and Its Legal Basis	60							30	30				3	grade
13	Basics of Geology and Geomorphology	60							30		30			4	grade
Total number of hours:			**180**	**75**	**135**	**0**	**0**		**180**	**60**	**120**	**0**	**30**		
Total number of hours in a semester:		**780**	**390**					**30**	**390**					**30**	
Number of exams:		**7**	**4**						**3**						

Industrial Safety – I semester 4h
Library training - I semester 4h

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Stationary**
Recruitment: 2010

Year II

No.	Course	Number of hours	3rd semester						ECTS	4th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Foreign Langauge	90		30					1		60					3	grade, exam
2	Physical Education	60		30					0		30					0	credit
Main subjects																	
3	Nature Protection	75	30	30				15	6								exam
4	Geology and Geomorphology	60	30		30				5								exam
5	Soil Studies	75	30		30			15	6								exam
6	Technology of Environmental Renewal	75								30			30		15	7	exam
7	Climatology and Meteorology	60								30				30		6	exam
8	Hydrology and Water Management	60								30				30		6	exam
Subjects for speciality																	
9	Chemistry of Environment	60	30		30				3								grade
10	Monitoring of Environment	60	30					30	3								grade
11	Environmental Health Dangers	60	30	30					3								grade
12	Geo-Engineering of Environment	60	30	30					3								grade
13	Law of Environment Protection	60								30	30					4	grade
14	Economics in Environment Protection	60								30	30					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**210**	**150**	**90**	**0**	**0**	**60**		**150**	**150**	**0**	**30**	**60**	**15**		
Total number of hours in a semester:		**915**	**510**						**30**	**405**						**30**	
Number of exams:		**7**	**3**							**4**							

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Stationary**
Recruitment: 2010

Year III

No.	Course	Number of hours	5th semester						ECTS	6th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Industrial Safety and Basics of Ergonomics	30	30						3								grade
Main subjects																	
2	Process Engineering	60	30	30					7								exam
3	Bio-Energetic Processes	60	30	30					7								exam
4	Diploma Seminar	45					15		1					30		3	grade
5	Waste Management	90								30			30		30	8	exam
Subjects for speciality																	
6	Legal Aspects of Land Protection and Rehabilitation	60	30	30					4								grade
7	Monitoring of Environment on Degradated Areas	60	30	30					4								grade
8	Civilizational Dangers and Balanced Development	60	30				30		4								grade
9	Stocktaking and Designing Rehabilitation of Degradated Areas	75									30		30		15	8	exam
10	Rehabilitation of Degradated Areas I	60								30	30					7	exam
11	Gartography with Elements of Geodesy and Cost Estimation	30									30					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**180**	**120**	**0**	**0**	**45**	**0**		**60**	**90**	**0**	**60**	**30**	**45**		
Total number of hours in a semester:		**630**	**345**						**30**	**285**						**30**	
Number of exams:		**5**	**2**							**3**							

Year IV

No.	Course	Number of hours	7th Semester						ECTS	Form of credit
			lc	c	lb	p	s	t		
Main subjects										
1	Diploma Seminar	30					30		3	grade
Subjects for speciality										
2	Rehabilitation of Degradated Areas II	75	30	30				15	7	exam
3	Documentation of Environmental Protection Processes in Administration	70	10	30		30			5	exam
4	Preparation of a Diploma Thesis and Exam Revision	own work							15	grade
Total number of hours:			**40**	**60**	**0**	**30**	**30**	**15**		
Total number of hours in a semester:		**175**	**175**						**30**	
Number of exams:		**2**	**2**							

Major: Environment protection
Specialization: Systems of environment protection, **Stationary**
Recruitment: 2009

Year I

No.	Course	Number of hours	1st semester						ECTS	2nd Semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Information Technology	60	15		45				2								grade
2	Economics	60	30	30					3								grade
3	Protection of Intelectual Property	30								30						2	grade
4	Foreign Language	30									30					1	grade
Basic subjects																	
5	Mathematics	90	45	45					6								exam
6	Biology	60	30		30				7								exam
7	Chemistry	60	30		30				7								exam
8	Physics	60	30		30				5								exam
9	Microbiology	60								30		30				7	exam
10	Biochemistry	60								30		30				7	exam
Main subjects																	
11	Ecology	90								30		30		30		6	exam
12	Organisation of Environmental Protection and Its Legal Basis	60								30	30					3	grade
13	Basics of Geology and Geomorphology	60								30		30				4	grade
Total number of hours:			**180**	**75**	**135**	**0**	**0**			**180**	**60**	**120**	**0**	**30**			
Total number of hours in a semester:		**780**	**390**						**30**	**390**						**30**	
Number of exams:		**7**	**4**							**3**							

Industrial Safety – I semester 4h
Library training - I semester 4h

Major: Environment protection
Specialization: Systems of environment protection, **Stationary**
Recruitment: 2009

Year II

No.	Course	Number of hours	3rd semester						ECTS	4th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Foreign Langauge	90		30					1		60					3	grade/exam
2	Physical Education	60		30					0		30					0	credit
Main subjects																	
3	Nature Protection	75	30	30				15	6								exam
4	Geology and Geomorphology	60	30		30				5								exam
5	Soil Studies	75	30		30			15	6								exam
6	Technology of Environmental Renewal	75								30			30		15	7	exam
7	Climatology and Meteorology	60								30				30		6	exam
8	Hydrology and Water Management	60								30				30		6	exam
Subjects for speciality																	
9	Chemistry of Environment	60	30		30				3								grade
10	Monitoring of Environment	60	30					30	3								grade
11	Environmental Health Dangers	60	30	30					3								grade
12	Geo-Engineering of Environment	60	30	30					3								grade
13	Law of Environment Protection	60								30	30					4	grade
14	Economics in Environment Protection	60								30	30					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**210**	**150**	**90**	**0**	**0**	**60**		**150**	**150**	**0**	**30**	**60**	**15**		
Total number of hours in a semester:		**915**	**510**						**30**	**405**						**30**	
Number of exams:		**7**	**3**							**4**							

Major: Environment protection
Specialization: Systems of environment protection, **Stationary**
Recruitment: 2009

Year III

No.	Course	Number of hours	5th semester						ECTS	6th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Industrial Safety and Basics of Ergonomics	30	30						3								grade
Main subjects																	
2	Process Engineering	60	30	30					7								exam
3	Bio-Energetic Processes	60	30	30					7								exam
4	Diploma Seminar	45					15		1					30		3	grade
5	Waste Management	90								30			30		30	8	exam
Subjects for speciality																	
6	Bio-Technology od Environment	60	30	30					4								grade
7	Water and Sewage Systems	60	30	30					4								grade
8	Civilizational Dangers and Balanced Development	60	30				30		4								grade
9	Systems of Atmosphere and Lithosphere Protectiojn	90								15	30		30		15	8	exam
10	Diaphragm Processes in Environment Protection	45								15	30					7	exam
11	Cartography with Elements of Geodetic Surveying	30									30					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**180**	**120**	**0**	**0**	**45**	**0**		**60**	**90**	**0**	**60**	**30**	**45**		
Total number of hours in a semester:		**630**	**345**						**30**	**285**						**30**	
Number of exams:		**4**	**2**							**2**							

Year IV

No.	Course	Number of hours	Semestr 7						ECTS	Form of crediting
			lc	c	lb	p	s	t		
Main subjects										
1	Diploma Seminar	30					30		3	grade
Subjects for speciality										
2	Rehabilitation of Degradated Areas	75	30	30				15	7	exam
3	Management of Environment in Administration and Economic Entities	70	10	30		30			5	exam
4	Preparation of a Diploma Thesis and Exam Revision	Own work							15	grade
Total number of hours:			**40**	**60**	**0**	**30**	**0**	**15**		
Total number of hours in a semester:		**175**	**345**						**30**	
Number of exams:		**2**	**2**							

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Stationary**
Recruitment: 2009

Year I

No.	Course	Number of hours	1st semester					ECTS	2nd semester					ECTS	Form of credit
			lc	c	lb	p	s		lc	c	lb	p	s		
Subjects of general education															
1	Information Technology	60	15		45			2							grade
2	Economics	60	30	30				3							grade
3	Protection of Intelectual Property	30							30					2	grade
4	Foreign Language	30								30				1	grade
Basic subjects															
5	Mathematics	90	45	45				6							exam
6	Biology	60	30		30			7							exam
7	Chemistry	60	30		30			7							exam
8	Physics	60	30		30			5							exam
9	Microbiology	60							30		30			7	exam
10	Biochemistry	60							30		30			7	exam
Subjects for speciality															
11	Ecology	90							30		30		30	6	exam
12	Organisation of Environmental Protection and Its Legal Basis	60							30	30				3	grade
13	Basics of Geology and Geomorphology	60							30		30			4	grade
Total number of hours:			**180**	**75**	**135**	**0**	**0**		**180**	**60**	**120**	**0**	**30**		
Total number of hours in a semester:		**780**	**390**					**30**	**390**					**30**	
Number of exams:		**7**	**4**						**3**						

Industrial Safety – I semester 4h
Library training - I semester 4h

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Stationary**
Recruitment: 2009

Year II

No.	Course	Number of hours	3rd semester						ECTS	4th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Foreign Langauge	90		30					1		60					3	grade/exam
2	Physical Education	60		30					0		30					0	credit
Main subjects																	
3	Nature Protection	75	30	30				15	6								exam
4	Geology and Geomorphology	60	30		30				5								exam
5	Soil Studies	75	30		30			15	6								exam
6	Technology of Environmental Renewal	75								30			30		15	7	exam
7	Climatology and Meteorology	60								30				30		6	exam
8	Hydrology and Water Management	60								30				30		6	exam
Subjects for speciality																	
9	Chemistry of Environment	60	30		30				3								grade
10	Monitoring of Environment	60	30					30	3								grade
11	Environmental Health Dangers	60	30	30					3								grade
12	Geo-Engineering of Environment	60	30	30					3								grade
13	Law of Environment Protection	60								30	30					4	grade
14	Economics in Environment Protection	60								30	30					4	grade
15	Traineeship	4 weeks														0	credit
Total number of hours:			**210**	**150**	**90**	**0**	**0**	**60**		**150**	**150**	**0**	**30**	**60**	**15**		
Total number of hours in a semester:		**915**	**510**						**30**	**405**						**30**	
Number of exams:		**7**	**3**							**4**							

Major: Environment protection
Specialization: Protection and rehabilitation of degradated areas, **Stationary**
Recruitment: 2009

Year III

No.	Course	Number of hours	5th semester						ECTS	6th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Industrial Safety and Basics of Ergonomics	30	30						3								grade
Main subjects																	
2	Process Engineering	60	30	30					7								exam
3	Bio-Energetic Processes	60	30	30					7								exam
4	Diploma Seminar	45					15		1					30		3	grade
5	Waste Management	90								30			30		30	8	exam
Subjects for speciality																	
6	Legal Aspects of Land Protection and Rehabilitation	60	30	30					4								grade
7	Monitoring of Environment on Degradated Areas	60	30	30					4								grade
8	Civilizational Dangers and Balanced Development	60	30				30		4								grade
9	Stocktaking and Designing Rehabilitation of Degradated Areas	75									30		30		15	8	exam
10	Rehabilitation of Degradated Areas I	60								30	30					7	exam
11	Gartography with Elements of Geodesy and Cost Estimation	30									30					4	grade
12	Traineeship	4 weeks														0	credit
Total number of hours:			**180**	**120**	**0**	**0**	**45**	**0**		**60**	**90**	**0**	**60**	**30**	**45**		
Total number of hours in a semester:		**630**	**345**						**30**	**285**						**30**	
Number of exams:		**5**	**2**							**3**							

Year IV

No.	Course	Number of hours	7th Semester						ECTS	Form of credit
			lc	c	lb	p	s	t		
Main subjects										
1	Diploma Seminar	30					30		3	grade
Subjects for speciality										
2	Rehabilitation of Degradated Areas	75	30	30				15	7	exam
3	Documentation of Environmental Protection Processes	70	10	30		30			5	exam
4	Preparation of a Diploma Thesis and Exam Revision	Own work							15	grade
Total number of hours:			**40**	**60**	**0**	**30**	**30**	**15**		
Total number of hours in a semester:		**175**	**175**						**30**	
Number of exams:		**2**	**2**							

Major: Environment protection
Recruitment: 2008 **Stationary**

Year I

No.	Course	Number of hours	1st semester					ECTS	2nd semester					ECTS	Form of credit
			lc	c	lb	p	s		lc	c	lb	p	s		
Subjects of general education															
1	Information Technology	60	15		45			2							grade
2	Economics	60	30	30				3							grade
3	Protection of Intelectual Property	30							30					2	grade
4	Foreign Language	30								30				1	grade
Basic subjects															
5	Mathematics	90	45	45				6							exam
6	Biology	60	30		30			7							exam
7	Chemistry	60	30		30			7							exam
8	Physics	60	30		30			5							exam
9	Microbiology	60							30		30			7	exam
10	Biochemistry	60							30		30			7	exam
Main subjects															
11	Ecology	90							30		30		30	6	exam
12	Organisation of Environmental Protection and Its Legal Basis	60							30	30				3	grade
13	Basics of Earth Study	60							30	30				4	grade
Total number of hours:			**180**	**75**	**135**	**0**	**0**		**180**	**90**	**90**	**0**	**30**		
Total number of hours in a semester:		**780**	**390**					**30**	**390**					**30**	
Number of exams:		**7**	**4**						**3**						

Industrial Safety – I semester 4h
Library training - I semester 4h

Major: Environment protection
Recruitment: 2008 **Stationary**

Year II

No.	Course	Number of hours	3rd semester						ECTS	4th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Foreign Langauge	90		30					1		60					3	grade/exam
2	Physical Education	60		30					1		30					1	grade
Main subjects																	
3	Nature Protection	75	30	30				15	6								exam
4	Geology and Geomorphology	60	30				30		5								exam
5	Soil Studies	75	30		30			15	5								exam
6	Technology of Environmental Renewal	75								30			30		15	6	exam
7	Climatology and Meteorology	60								30				30		5	exam
8	Hydrology and Water Management	60								30				30		5	exam
Subjects for speciality																	
9	Chemistry of Environment	60	30		30				3								grade
10	Monitoring of Environment	60	30					30	3								grade
11	Toxycology	60	30	15	15				3								grade
12	Water Management in Industry	60	30			30			3								grade
13	Eco-systems	60	30	30					3								grade
14	Geo-Engineering of Environment	60	30	30					3								grade
15	Engineering Graphics	60										60				4	grade
16	Law of Environment Protection	60								30	30					4	grade
17	Economics in Environment Protection	60								30	30					4	grade
15	Traineeship	5 weeks														2	grade
Total number of hours:			**270**	**165**	**75**	**30**	**30**	**60**		**150**	**150**	**60**	**30**	**60**	**15**		
Total number of hours in a semester:		**915**	**510**						**30**	**405**						**30**	
Number of exams:		**7**	**4**							**3**							

Major: Environment protection
Recruitment: 2008 **Stationary**

Year III

No.	Course	Number of hours	5th semester						ECTS	6th semester						ECTS	Form of credit
			lc	c	lb	p	s	t		lc	c	lb	p	s	t		
Subjects of general education																	
1	Industrial Safety and Basics of Ergonomics	30	30						3								grade
Basic subjects																	
2	Process Engineering	60	30	30					7								exam
3	Bio-Energetic Processes	60	30	30					7								exam
4	Diploma Seminar	45					15		1					30		3	grade
5	Waste Management	90								30			30		30	8	exam
Subjects for speciality																	
6	Bio-Technology od Environment	60	30	30					4								grade
7	Water and Sewage Systems	60	30	30					4								grade
8	Liquid Mechanics	60	30	30					4								grade
9	Civilizational Dangers and Balanced Development	60	30				30		4								grade
10	Systems of Atmosphere protection	75								30	30				15	6	exam
11	Systems of Lithosphere Protection	75								30	30				15	6	exam
12	Diaphragm Processes in Environment Protection	60								30	30					4	exam
13	Cartography with Elements of Geodetic Surveying	60								30	30					4	grade
14	Environmental Health Hazards	60								30	30					4	grade
15	Traineeship	5 weeks														3	grade
Total number of hours:			**210**	**150**	**0**	**0**	**45**	**0**		**180**	**150**	**0**	**30**	**30**	**60**		
Total number of hours in a semester:		**630**	**345**						**30**	**285**						**30**	
Number of exams:		**6**	**3**							**3**							

Year IV

No.	Course	Number of hours	Semestr 7						ECTS	Form of credit
			lc	c	lb	p	s	t		
Main subjects										
1	Diploma Seminar	30					30		3	credit
Subjects for speciality										
2	Rehabilitation of Degradated Areas	75		30		30		15	6	credit
3	Management of Environment in dministration and Economic Entities	75		30		15	30		6	credit
4	Documentation of Environmental Protection Processes	75		30		30	15		6	credit
5	Preparation of a Diploma Thesis and Exam Revision	Own work							15	credit
Total number of hours:			**0**	**90**	**0**	**75**	**75**	**15**		
Total number of hours in a semester:		**255**	**255**						**30**	
Number of exams:		**0**	**0**							

Description of individual course units:

Subjects of general education

ECTS credits
3

1. Course title
Economics
2. Course contents
Lecture/Classes
Introduction to economy and economics; Resources and their alternative applications; macroeconomics vs. microeconomics; basic tools of economic analysis, market economy, market and its functions; demand and supply; basics of customer's economic decisions; basics of theory of enterprise; forms of enterprises; expenses; competition; main macroeconomic problems; fiscal policy; economic growth.
3. Prerequisites
Elementary knowledge of market economy functioning
4. Learning outcomes
Student: understands basic principles of market economy functioning; understands principles market price mechanism – its limitations and motives that guide entrepreneurs and customers' behaviour; thinks in term of the whole economy and the economy connected with the international one; understands mechanisms leading to economic slump; understands mechanisms stimulating economic recovery and its development; understands the role of central bank.
5. Recommended reading
1. Sloman J.: *Basics of Economics* (org. *Podstawy Ekonomii)*, PWE, 2000r.
2. Czarny B., Czarny E., Barkowiak R., Rapacki R.: *Basics of Economics* (org. *Podstawy Ekonomii)*, PWE 1998 r.
3. *Basics of Economics* (org. *Podstawy Ekonomii)*, edited by R. Milewskiego, PWN, Warszawa 1998r.
6. Type of course
Obligatory
7. Teaching team
Department of Management and Information Technology
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30	I	I
Classes	30	I	I
Laboratory			
Project			
Seminar			
Other			
Total student's workload			

9. Assessment methods
Credit card
10. Language of instruction
Polish

ECTS credits
1

1. Course title:
English – elementary A1
2. Course contents
Asking the time, colours
Describing time: times of the day, days of the weeks, time
Arranging a meeting
Giving the time
Talking about plans for the future, suggestions, preferences
Rooms in a house / flat, describing location of objects
Analyzing simple advertisements: selling or renting a flat
3. Prerequisites:
none
4. Learning outcomes:
Student prepares for TELC examination of English at A1 level.
5. Recommended reading
Grant David, Robert McLarty, *Quick Work*, elementary, OUP, 2006
6. Type of course: facultative
7. Teaching team: Department of Administration
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30	5	III
Seminars			
Total student's workload	60		

9. Assessment methods: exam
10. Language of instruction
Polish / Russian

ECTS credits
1

1. Course title:
English – elementary A1
2. Course contents
Making contacts, personal data, geographic names.
Four seasons, weather, atmosphere conditions.
Interests and hobbies.
Free time activities, job and working. Daily routines.
3. Prerequisites:
none
4. Learning outcomes:
Student knows English at elementary **level A1** in the skills of speaking, writing and understanding. An English learner at A1 level is able to understand and use simple sentences and every day phrases in order to fulfill particular simple needs. A1 student can introduce himself / herself or another person, ask questions about place of residence, friends, possessions etc. and can answer the same kind of questions; is able to communicate with others in a simple way on condition that an interlocutor speaks slowly, clearly and is willing to cooperate.
5. Recommended reading
Oxenden Clive, Christina Latham-Koenig, Paul Seligson New English File pre-intermediate, OUP 2007.
6. Type of course: facultative
7. Teaching team: foreign language lector
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30/18	2	I
Seminars			
Total student's workload	30		

9. Assessment methods: credit
10. Language of instruction
Polish / English

ECTS credits
1

1. Course title:
English – elementary A2
2. Course contents
1. Skills:
1.1 Comprehending, detailed and selective, of short written texts (press articles, advertisements, e-mails, advice, descriptions of places, tourist destinations ...) and spoken ones (telephone conversations, radio advertisements, conversations in a shop, on a plane etc. ...)
1.2 Conversation:
- Giving information about yourself according to the following criteria (a monolog with two extra questions asked by the lector)
- Exchanging information with an interlocutor to get to know each other (asking questions and answering)
- Asking: what?, why?, when? (suggesting, accepting, refusing, short justification)
1.3 Practicing language competence in vocabulary and grammar tests of multiple choice, limited choice and gap filling, about the following:
- expressing reason, effect, goals
- vocabulary for expressing opinions and thoughts
- writing letters: asking for information, giving information
2. Vocabulary:
- interests
- entertainment
- way to school / work
3. Prerequisites:
Ability to speak English at A2 level
4. Learning outcomes:
Student prepares for TELC examination of English at A2 level.
Student is able to communicate in English in a spoken and written form, write short letters and exchange simple information with an interlocutor according to a particular scheme.
5. Recommended reading
Grant David, Robert McLarty, *Quick Work*, elementary, OUP, 2006
6. Type of course: facultative
7. Teaching team: Department of Administration
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30/18	5	III
Seminars			
Total student's workload	30		

9. Assessment methods: exam
10. Language of instruction: English

ECTS credits
1

1. Course title
English – elementary A2
2. Course contents
1. Skills:
1.1 Comprehending, detailed and selective, of short written texts (press articles, advertisements, e-mails, advice, descriptions of places, tourist destinations ...) and spoken ones (telephone conversations, radio advertisements, conversations in a shop, on a plane etc. ...)
1.2 Speaking:
- Giving information about yourself according to the following criteria (a monolog with two extra questions asked by the lector)
- Exchanging information with an interlocutor to get to know each other (asking questions and answering)
- Asking: what?, why?, when? (suggesting, accepting, refusing, short justification)
1.3 Practising language competence in vocabulary and grammar tests of multiple choice, limited choice and gap filling, about the following:
- tenses and conditionals
- time clauses
- reported speech
- vocabulary for expressing opinions and thoughts
1.4 Writing letters: asking for information, giving information
2. Vocabulary:
- Plans for the weekend, holidays
- months
- dates
- describing holidays, yesterday
3. Prerequisites:
Ability to speak English at A2 level
4. Learning outcomes:
Student prepares for TELC examination of English at A2 level.
Student is able to communicate in English in a spoken and written form, write short letters and exchange simple information with an interlocutor according to a particular scheme.
5. Recommended reading
Grant David, Robert McLarty, *Quick Work*, elementary, OUP, 2006
6. Type of course: facultative
7. Teaching team: Department of Administration
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30/18	2	I
Seminars			
Total student's workload	30		

9. Assessment methods: credit
10. Language of instruction: English

ECTS credits
2

1. Course title:
English – intermediate B1
2. Course contents
1. Skills:
1.1 Comprehending, detailed and selective, of short written texts
1.2 Conversation:
- Giving information about
- Exchanging information about a picture, photograph, drawing and giving opinion
- Negotiating
1.3 Practicing language competence in vocabulary and grammar tests of multiple choice, limited choice and gap filling, about the following:
- expressing reason, effect, goals
- vocabulary for expressing opinions and thoughts
- writing letters: asking for information, giving information
2. Vocabulary:
- interests
- entertainment
- way to school / work

3. Prerequisites:
Ability to speak English at A2 level
4. Learning outcomes:
Student prepares for TELC examination of English at A2 level.
Student is able to communicate in English in a spoken and written form, write short letters and exchange simple information with an interlocutor according to a particular scheme.
5. Recommended reading
Grant David, Robert McLarty, *Quick Work*, elementary, OUP, 2006
6 Type of course: facultative
7. Teaching team: Department of Administration
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30	5	III
Seminars			
Total student's workload	60		

9. Assessment methods: exam
10. Language of instruction: English

ECTS credits
1

1. Course title:
English – intermediate B1
2. Course contents
Business correspondence (e-mails, letters, in-company correspondence etc.)
Presentations – preparation, performance, structure and language of presentation. Making use of non-verbal aids - preparing, comparing, describing statistical data, graphs, charts.
Techniques of 'problem-solving' during presentations and meetings.
Arranging meetings, changing arrangements, giving reasons, etc.. (also on the phone and by e-mail)
Participating in meetings, presentation, discussion, summarizing and concluding.
Intercultural sensitivity.. Cultural differences at formal meetings.
3. Prerequisites:
Ability to speak English at B1 level
4. Learning outcomes:
Student prepares for TELC examination of English B1 level.
Student fluently communicates in English in a spoken and written form, writes letters and exchanges information with an interlocutor according to a particular scheme.
5. Recommended reading
Powell Mark, *In company Intermediate*, Macmillan,2002
Taylor liz, *International Express Intermediate*,OUP,2002
6. Type of course: facultative
7. Teaching team: Department of Administration
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30/18	4	II
Seminars			
Total student's workload	30		

9. Assessment methods: credit
10. Language of instruction: English

ECTS credits
2

1. Course title:
German – intermediate B1
2. Course contents
1. Skills:
1.1 Comprehending, detailed and selective, of short written texts
1.2 Conversation:
Giving information about
Exchanging information about a picture, photograph, drawing and giving opinion
Negotiating
1.3 Practicing language competence in vocabulary and grammar tests of multiple choice, limited choice and gap filling, about the following:
1.4 writing letters: asking for information, giving information
2. Vocabulary:
sport and entertainment: leisure time activities, cinema, theatre, music, exhibitions, sports, games, tournaments, festivals, days-off...
Media and means of communicating: press, radio, television, telephone, fax, computer ...
Social, economical and political surrounding: institutions and political parties, public authorities, social matters, living conditions, population, army ...
Interpersonal and intercultural differences: regions, neighbour countries, exchanges, immigration, mother tongues, foreign language, habits, traditions ...
3. Prerequisites:
Ability to speak German at B1 level
4. Learning outcomes:
Student prepares for TELC examination of German at B1 level.
Student is able to communicate in German in a spoken and written form, write short letters and exchange simple information with an interlocutor according to a particular scheme.
5. Recommended reading
Funk, Kuhn, Demme, Winzer: studio d B1 Język niemiecki, Cornelsen, Warszawa 2008
6. Type of course: facultative
7. Teaching team: Department of Administration
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30/18	5	III
Seminars			
Total student's workload	60		

9. Assessment methods:
exam
10. Language of instruction:
German

ECTS credits
1

1. Course title:
German – elementary A1
2. Course contents
Asking the time, colours
Describing time: times of the day, days of the weeks, time
Arranging a meeting
Giving the time
Talking about plans for the future, suggestions, preferences
Rooms in a house / flat, describing location of objects
Analyzing simple advertisements: selling or renting a flat
3. Prerequisites:
none
4. Learning outcomes:
Student prepares for TELC examination of German at A1 level.
5. Recommended reading
Funk, Kuhn, Demme, Winzer: studio d A1 Język niemiecki, Cornelsen, Warszawa 2008
6. Type of course: facultative
7. Teaching team: foreign language lector
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30/18	5	III
Seminars			
Total student's workload	60		

9. Assessment methods: exam
10. Language of instruction
Polish / German

ECTS credits
1

1. Course title:
German – elementary A1
2. Course contents
Making contacts, personal data, geographic names.
Four seasons, weather, atmosphere conditions.
Interests and hobbies.
Free time activites, job and working. Daily routines.
3. Prerequisites:
none
4. Learning outcomes:
Student knows German at elementary **level A1** in the skills of speaking, writing and understanding. A German learner at A1 level is able to understand and use simple sentences and every day phrases in order to fulfill particular simple needs. A1 student can introduce himself / herself or another person, ask questions about place of residence, friends, possessions etc. and can answer the same kind of questions; is able to communicate with others in a simple way on condition that an interlocutor speaks slowly, clearly and is willing to cooperate.
5. Recommended reading
Hermann Funk, Rita M. Niemann , Dong Ha Kim, Studio D A1, Cornelsen, 2005
6. Type of course: facultative
7. Teaching team: foreign language lector
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30	2	I
Seminars			
Total student's workload	30		

9. Assessment methods: credit
10. Language of instruction
Polish / German

ECTS credits
1

1. Course title:
German – elementary A2
2. Course contents
1. Skills:
1.1 Comprehending, detailed and selective, of short written texts (press articles, advertisements, e-mails, advice, descriptions of places, tourist destinations ...) and spoken ones (telephone conversations, radio advertisements, conversations in a shop, on a plane etc. ...)
1.2 Conversation:
- Giving information about yourself according to the following criteria (a monolog with two extra questions asked by the lector)
- Exchanging information with an interlocutor to get to know each other (asking questions and answering)
- Asking: what?, why?, when? (suggesting, accepting, refusing, short justification)
1.3 Practicing language competence in vocabulary and grammar tests of multiple choice, limited choice and gap filling, about the following:
- expressing reason, effect, goals
- vocabulary for expressing opinions and thoughts
- writing letters: asking for information, giving information
2. Vocabulary:
- interests
- entertainment
- way to school / work
3. Prerequisites:
Ability to speak German at A2 level
4. Learning outcomes:
Student prepares for TELC examination of German at A2 level.
Student is able to communicate in German in a spoken and written form, write short letters and exchange simple information with an interlocutor according to a particular scheme.
5. Recommended reading
6. Type of course: facultative
7. Teaching team: foreign language lector
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30	5	III
Seminars			
Total student's workload	60		

9. Assessment methods: examination
10. Language of instruction: German

ECTS credits
1

1. Course title:
German – elementary A2
2. Course contents
1. Skills:
1.1 Comprehending, detailed and selective, of short written texts (press articles, advertisements, e-mails, advice, descriptions of places, tourist destinations ...) and spoken ones (telephone conversations, radio advertisements, conversations in a shop, on a plane etc. ...)
1.2 Speaking:
- Giving information about yourself according to the following criteria (a monolog with two extra questions asked by the lector)
- Exchanging information with an interlocutor to get to know each other (asking questions and answering)
- Asking: what ?, why ?, when ? (suggesting, accepting, refusing, short justification)
1.3 Practicing language competence in vocabulary and grammar tests of multiple choice, limited choice and gap filling, about the following:
- tenses and conditionals
- time clauses
- reported speech
- vocabulary for expressing opinions and thoughts
1.4 Writing letters: asking for information, giving information
2. Vocabulary:
- Plans for the weekend, holidays
- months
- dates
- describing holidays, yesterday
3. Prerequisites:
Ability to speak German at A2 level
4. Learning outcomes:
Student prepares for TELC examination of German at A2 level.
Student is able to communicate in German in a spoken and written form, write short letters and exchange simple information with an interlocutor according to a particular scheme.
5. Recommended reading
Funk, Kuhn, Demme, Winzer: studio d A2 Język niemiecki, Cornelsen, Warszawa 2008
6. Type of course: facultative
7. Teaching team: foreign language lector
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30	2	I
Seminars			
Total student's workload	60		

9. Assessment methods: credit
10. Language of instruction: German

ECTS credits
1

1. Course title:
German – intermediate B1
2. Course contents
Business contacts correspondence (e-mails, letters, in-company correspondence etc.)
Presentations – preparation, performance, structure and language of presentation. Making use of non-verbal aids - preparing, comparing, describing statistical data, graphs, charts.
Techniques of 'problem-solving' during presentations and meetings.
Arranging meetings, changing arrangements, giving reasons, etc.. (also on the phone and by e-mail)
Participating in meetings, presentation, discussion, summarizing and concluding.
Cultural differences at formal meetings. Negotiations.
3. Prerequisites:
Ability to speak German at B1 level
4. Learning outcomes:
Student prepares for TELC examination of German B1 level.
Student fluently communicates in German in a spoken and written form, writes letters and exchanges information with an interlocutor according to a particular scheme.
5. Recommended reading
6. Type of course: facultative
7. Teaching team: foreign language lector
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30	4	II
Seminars			
Total student's workload	60		

9. Assessment methods: credit
10. Language of instruction: German

ECTS credits
2

1. Course title:
Information Technology
2. Course contents
Basics of spreadsheets on the example of Excel 2000/2003; rules og creating spreadsheets, elements og spreadsheets, types and structures of data, entering and formatting data, standard functions, creating formulas, graphic presentation of data. Advanced topics: a spreadsheet as a database (adding records, sorting out, list management; filtring), spreadsheet in group work, formulas and advanced functions, presentation of geographic data - MICROSOFT MAP, presenting and preparing compound printouts, advanced operations on database lists. Definitions of databases. Basis of databases – example of ACCESS 2000 application; basics of working with a database; performing operations on existing databases; designing databases; database charts; creating forms and reports. Creating individual own database. Using computer network.
3. Prerequisites:
Elementary knowledge of computer science
4. Learning outcomes:
Student knows basics of information knowledge particularly regarding application of modern software and knows how to use computer hardware
5. Recommended reading
Banachowski L., *Bazy danych. Tworzenie aplikacji*, Akademicka Oficyna Wydawnicza PLJ, Warszawa 1998
Benon- Davies P., *Systemy baz danych*, WNT, Warszawa 1998
Jakubowski J., *Zastosowanie Informatyki w Administracji – część II*, Wydawnictwo WSZ Administracji Publicznej w Sulechowie, Sulechów 2000
Nelson S., *Microsoft Excel 2000 PL. Mały poradnik*, PWN, Warszawa 2000
Supranowicz R., Łozowski L., *Podstawy pracy z bazami danych MS ACCESS* 2003, PWSZ, Legnica 2006
6. Type of course: obligatory
7. Teaching team: Department of Information Technology and Production Engineering
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	30/18	2	1
Seminars			
Total student's workload	60		

9. Assessment methods: credit
10. Language of instruction
Polish

ECTS credits
0

1. Course title
Physical Education
2. Course contents
Volleyball: technique of high standing, moving at the court, catching a ball with a pass with both hands and playing a high ball in a high standing, serving, setting a player for a spike, catching in a tennis way, deflecting a ball in a low standing and in staggering balance, individual and team tactics. Standing when serving on their own and at the opponent's serving, the rules of the game. Basketball: moving at the court when attacking and defending, starting, stopping, changing direction and speed of running, techniques of caching and throwing a ball from the place, from half-distance, running, with right hand, with left hand, quick attack, team defense, the rules of the game. Handball: techniques of catching and throwing, moving with a ball, scoring into a goal, from the place, while running, from a jump, deluding with a ball and without a ball, individual and group tactics while attacking and defending, the rules of the game.
3. prerequisites
no prerequisites required
4. Learning outcomes
Stimulating self-educational physical activity. Healthy influence of physical activity on an organism. Developing motor and physical skills. Getting familiarized with various kinds of games and plays as a form of a pleasant competition parallel with developing motor skills. Gaining abilities of organizing sports events and competitions. Learning rules of different sports disciplines. Taking part in sporting activities and competitions. Mental relax, improvement of mental and physical state. All the acquired knowledge and skills can be further used in the future while working as animators, instructors and organizers of motor activity of their own, their families' and friends'.
5 Recommended reading
None.
6. Type of course
Obligatory
7. Teaching team
Department of Recreation
8. Course structure

Form	Number of hours	Semester	Year
Lecture			
Classes	30	III	2
Laboratory			
Project			
Seminar			
Other			
Total student's workload	30		

9. Assessment methods:
Unrated credits (without a grade) based on attendance in class
10. Language of instruction:
Polish

ECTS credits
0

1. Course title
Physical Education
2. Course contents
Football: elements of individual techniques, constant parts of a game, basis of individual and group tactics, small games (2x2, 3x3, 4x4), the rules of the game. Swimming: learning to swim in selected swimming styles (classic, crawl on the back, crawl on the front, dolphin), games and plays in water, getting familiar with basics of first aid in water and water rescue, learning to start, jump into water and taking part in swimming competitions. Aerobics: developing physical and motor fitness, improving motor coordination, doing exercises along with music. Bodybuilding exercises: all-developmental and all-improving physical exercises and their influence on shaping muscles and body; influence of bodybuilding activity on physical development, health and general state of the body, hygiene of bodybuilding exercises. Supplementary sports: implementation of other forms of sports and games such as: tennis, table tennis, unihok, badminton, Frisbee etc.
3. Prerequisites
no prerequisites required
4. Learning outcomes
Stimulating self-educational physical activity. Healthy influence of physical activity on an organism. Developing motor and physical skills. Getting familiarized with various kinds of games and plays as a form of a pleasant competition parallel with developing motor skills. Gaining abilities of organizing sports events and competitions. Learning rules of different sports disciplines. Taking part in sporting activities and competitions. Mental relax, improvement of mental and physical state. All the acquired knowledge and skills can be further used in the future while working as animators, instructors and organizers of motor activity of their own, their families' and friends'.
5. Recommended reading
None.
6. Type of course
Obligatory
7. Teaching team
Department of Recreation
8. Course structure

Form	Number of hours	Semester	Year
Lecture			
Classes	30	IV	2
Laboratory			
Project			
Seminar			
Other			
Total student's workload	30		

9. Assessment methods:
Unrated credits (without a grade) based on attendance in class
10. Language of instruction:
Polish

ECTS credits
2

1. Course title
Protection of Intellectual Property
2. Course contents
Lecture
Intellectual assets as a particular kind of legal goods; copyright; law of industrial property: objects of industrial property; role of the Patent Office of the Republic of Poland; subjects entitled to invention projects; contents of laws to invention projects within the scope of personal and property rights; general principles of protecting rights to objects of industrial property.
3. Prerequisites
Elementary knowledge of Intellectual Property Rights
4. Learning outcomes
Student can name basic sources of regulation and institution of intellectual property rights (section of civil law), understands terminology and terms in the scope this subject at elementary level – can individually find and interpret regulations of industrial property law with reference to possible factual circumstances and is able to prepare basic documents (contracts, simple process documents).
5. Recommended reading
1. J. Jezioro, Intellectual Property Rights (org. *Prawo własności intelektualnej)* (in:) Basics of Civil Law (org. Podstawy Prawa cywilnego) edited by: E. Gniewka, Warszawa 2005.
2. J. Barta, M. Czajkowska-Dąbrowska, Z. Ćwiąkalski, R. Markiewicz, E. Traple, *Copyright and Other Related Rights. Commentary (org.* Prawo *autorskie i prawa pokrewne. Komentarz), Kraków 2005.*
3. J. Barta R. Markiewicz, *Act on Database Protection. Commentary (org. Ustawa o ochronie baz danych. Komentarz),* Warszawa 2002.
6. Type of course
Obligatory
7. Teaching team
Department of Environmental Protection
8. Course structure

Form	Number of hours	Semester	Year
Lecture	30/30	I	2
Classes			
Laboratory			
Project			
Seminar			
Other			
Total student's workload	60		

9. Assessment methods
credit
10. Language of instruction
Polish

Basic subjects

ECTS credits
6

1. Course title

Mathematics.

2. Course contents

Lecture

Sequences and series of numbers. Definition and basic properties of functions of one and several variables. Differential calculus of functions of one variable. Integral calculus: definite and indefinite integral, applications of definite integrals. Matrices, determinants, systems of linear equations and Gauss elimination. Elements of analytical geometry. Examples of functional dependencies in the nature.

Classes

Computation methods of limits of sequences, convergence of series. Computation methods of limits of functions. Computations of derivatives of functions. Applications of differential calculus. Computations of definite and indefinite integrals. Operations on matrices. Computations of determinants of matrices. Methods of solving systems of linear equations. Distances and angles in the three-dimensional space.

3. Prerequisites

None.

4. Learning outcomes

Students apply elements of mathematical analysis and linear algebra in description and analysis of basic problems in the natural science, technical sciences and agricultural sciences. Students acquire the ability to give the mathematical description for some phenomena and processes in the nature and the ability of abstract understanding of the problems with the natural sciences.

5. Recommended reading

K. Selwat, *Wybrane zagadnienia matematyki*, Seria Wydawnicza PWSZ im. Witelona w Legnicy, Legnica, 2009.
M. Gewert, Z. Skoczylas, *Analiza matematyczna 1 i 2*, Oficyna Wydawnicza GiS, Wrocław, 2009.
T. Jurlewicz, Z. Skoczylas, *Algebra i geometria analityczna*, Oficyna Wydawnicza GiS, Wrocław, 2009.
G.M. Fichtenholz, *Rachunek różniczkowy i całkowy*. Tom I, PWN, Warszawa, 2007.
W. Krysicki, L. Włodarski, *Analiza matematyczna w zadaniach*, PWN, Warszawa, 2006.

6. Type of course

Obligatory.

7. Teaching team

Department of Basic Sciences.

8. Course structure

Form	Number of hours	Semester	year
Lecture	45/45	I	1
Classes	45/45	I	1
Laboratory			
Project			
Seminar			
Other			
Total student's workload	180		

9. Assessment methods:

Lecture – written examination,
classes – grading on the basis of written colloquia.

10. Language of instruction:

Polish.

ECTS credits
7

1. Course title
Biology
2. Course contents
Lecture
Levels of life organization – acellular forms, cells, tissues, organs. Unicellular and multicellular organisms; organism structure, structure of prokaryotic and eukaryotic cell, structure of tissues, systems of organs; development and growth: prenatal and postnatal development of a human being, cells and tissues' growth, differentiating of cells, cancer cell, basics of immunology; metabolism
3. Prerequisites
Elementary knowledge o biology of secondary school level
4. Learning outcomes
Student understands biological processes conditioning life at different levels of its organization; can use primary techniques of field and laboratory work of biology and microbiology specialists (observations in nature, recognizing, identification and classification of primary groups of organism; uses keys for determining fauna and flora, *in vitro* culture).
5. Recommended reading
1. Solomon E.P. i in. Biology (org. *Biologia),* MULICO Warszawa 2000.
2. Bobrowski M.M. Basics of sanitary Biology (org. *odstawy biologii sanitarnej),* Wydawnictwo Ekonomia i Środowisko, Białystok 2002.
3. Pawlaczyk-Szpilowa M., *Biology and Ecology (org*. „Biologia i ekologia,") Oficyna Wydawnicza Politechniki Wrocławskiej Wrocław 1997.
6. Type of course
Obligatory
7. Teaching team
Department of .Administration
8. Course structure

Form	Number of hours	Semester	Year
Lecture	30	I	1
Classes			
Laboratory	30		
Project			
Seminar			
Other			
Total student's workload			

9. Assessment methods
examination
10. Language of instruction
Polish

ECTS credits
7

1. Course title

Chemistry

2. Course contents

Lecture

Basic terms of chemistry – mole, relative atomic mass and molar mass, atom – atomic nucleus, isotopes; periodic classification of the elements; chemical reactions; crystal structure of matter; elements of electro-chemistry; water and water solutions; primary types of reactions in organic chemistry; saturated hydrocarbons – chain and cyclic; non-saturated hydrocarbons; organic compounds of halogens; alcohols, phenols, ethers; amines; amides; carbohydrates, lipids, proteins; enzymes – their structure and functioning specifity; aminoacids.

Laboratory

Learning primary laboratory techniques:

1. physical and chemical properties of compounds – determination of melting and boiling temperature, spectroscopy.
2. Analysis – determination of crystal water.
3. Reactions of oxidation and reduction.
4. Chemical preparation – winning of acetanilide.

3. Prerequisites

...

4. Learning outcomes

Student can describe properties of chemical elements, compounds, states of matter and basic types of chemical reactions through equations; performs chemical calculations; can win and identify simple chemical compounds; can measure and determine quantities and evaluate likelihood of physical and chemical quantities.

5. Recommended reading

1. ....
2. ...
3. ...

6. Type of course

Obligatory/elective/optional

7. Teaching team

Department of ...

8. Course structure

Form	Number of hours	Semester	Year
Lecture	30	I	1
Classes			
Laboratory	30	I	1
Project			
Seminar			
Other			
Total student's workload			

9. Assessment methods

...

10. Language of instruction

Polish

ECTS credits
5

1. Course title

Physics

2. Course contents

Lecture

Units of measure; basics of classical mechanics and macroscopic thermodynamics; elements of hydromechanics; electrical and magnetic properties of matter; electromagnetic waves; elements of acoustics, noise; elements of wave and geometric optics; basics of quantum mechanics; cosmic radiation.

Laboratory

Methodology of solving exercises of physics related to the subject matter of lectures (problem analysis, reduction, implementing laws of physics); training competence in using units of international system of units (SI); basics of measure uncertainty analysis.

3. Prerequisites

Elementary knowledge of physics at the secondary school level

4. Learning outcomes

Student can measure basics physical quantities or define them; understands physical phenomena and processes in nature; knows how to use natural laws in technique and everyday life.

5. Recommended reading

Halliday D., Resnick R., Walker J., *Basics of Physics (org. Podstawy fizyki).* Wydawnictwo Naukowe PWN, Warszawa 2005.

Orear J., *Physics (org. Fizyka)*, Wydaw. Naukowo-Techniczne, Warszawa 2004.

Boeker E, Grondelle R.v., *Environmental Physics (org. Fizyka środowiska)*, Wydawnictwo Naukowe PWN, Warszawa 2002

6. Type of course

Obligatory

7. Teaching team

Department of ...

8. Course structure

Form	Number of hours	Semester	Year
Lecture	30	I	1
Classes			
Laboratory	30	I	1
Project			
Seminar			
Other			
Total student's workload			

9. Assessment methods

examination

10. Language of instruction

Polish

Main subjects

ECTS credits
6

1. Course title:
Climatology and Meteorology
2. Course contents
Basic concepts of climatology and meteorology.
Atmosphere of the Earth, characteristics, dynamics and behaviour
Evolution of atmosphere.
Energetic balace of the system the Earth – atmosphere.
Circulation od heat and water circle in atmosphere.
Atmospheric circulation.
Pollution spread through atmosphere.
Gas and dust pollution.
Pllution of space.
Antropogenic changes of atmosphere: greenhouse effect, ozon layer hole, acid rain.
Selfcleaning of atmosphere.
Climate of various spheres of the Earth.
Changes of the Earth climate.
Weather elements.
Basic divices and meteorological equipment.
Synoptic meteorology.
3. Prerequisites:
General knowledge of Biology
4. Learning outcomes
Students can describe and interpret meteorological and climatological processes and phenomena in relation to the state of environment in Poland; they can outline elementary meteorological characteristics; identify threats for the atmospheric state; evaluate systems of atmosphere protection; and make use of basic measurement techniques.
5. Recommended reading
Kożuchowski K. (red) *Meteorologia i klimatologia* Wydawnictwo Naukowe PWN, Warszawa 2005
Garnier B.J., *Podstawy klimatologii*, Instytut Meteorologii i Gospodarki Wodnej, Warszawa 1996.
6. Type of course
Obligatory
7. Teaching team
Department of Environment Protection
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30	4	2
Classes			
Seminar	30		
Total student's workload	180		

9. Assessment methods
lecture and seminar - exam
10. Language of instruction
Polish

ECTS credits
6

1. Course title:
Environment Protection
2. Course contents
Environmental pollution: types of pollution physical, chemical and biological waste.
Self-cleaning of ecosystems.
Risky conditions in natural environment.
Biological and landscape variability of environment.
Methods of evaluating biological variability.
Methods of environmental protection while exploring natural sources.
Environment protection in Poland. Threats for fauna and flora.
Categories of dangers to species according to International Classification of Nature Protection Union (IUCN).
International classification and functions of protected areas (according to IUCN).
Area protection: national park, natural reservoir, landscape park, area of protected landscape.
Protection of species: direct and partial. Individual protection.
Active protection of nature.
Rules of establishing protection plans.
International conventions and declarations regarding natural protection.
Strategies of natural protection in European Union.
See ECONET and CORINE.
Nature 2000 System.
3. Prerequisites:
General knowledge of Biology
4. Learning outcomes
Students can make use of effective instruments of nature protection as well as acquired knowledge in making political and economic decisions.
5. Recommended reading
Pullin A.S., *Biologiczne podstawy ochrony przyrody*, Wydawnictwo Naukowe PWN, Warszawa 2005.
6. Type of course
Obligatory
7. Teaching team
Department of Environment Protection
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30	3	2
Classes	30		
Seminar	15		
Total student's workload	180		

9. Assessment methods
lecture, seminar, practical at the site - exam
10. Language of instruction
Polish

ECTS credits
7

1. Course title:
Technologies of Environment Recovery
2. Course contents
Sources of atmospheric air pollution
Primary and secondary methods of preventing atmospheric pollution.
Limiting emission of pollution..
Alternative energy sources.
Exploration and purification methods for surface and underground waters.
Water processing for communal and industrial purposes.
Characteristics, classification, content and properties of sewage.
Mechanical, biological and chemical wastewater treatment.
Technologies of communal and industrial sewage treatment.
Sources, characteristics and classification of waste.
Influence of waste on environment.
Rules of waste management: collecting, industrial and agricultural use, neutralization, disposal.
Management of harmful waste (integrated systems).
Preventive waste production - low-waste or no-waste technologies.
Project:
According to lecture curriculum.
3. Prerequisites:
General knowledge of Biology
4. Learning outcomes
Students know technologies of environment renewal and ways of preventing pollution and contamination.
5. Recommended reading
Anielak A. *Chemiczne i fizykochemiczne oczyszczanie ścieków* Wydawnictwo Naukowe PWN, Warszawa 2002.
Henze M. *Oczyszczanie ścieków: procesy biologiczne i chemiczne* Wydawnictwo Politechniki Świętokrzyskiej, Kielce 2002.
Łomotowski J., Szpindor A. *Nowoczesne systemy oczyszczania ścieków* "Arkady", Warszawa 1999
6. Type of course
Obligatory
7. Teaching team
Department of Environment Protection
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30	4	2
Classes	30		
Seminar	15		
Total student's workload	180		

9. Assessment methods
lecture, project, practical classes at the site - exam
10. Language of instruction
Polish

ECTS credits
4

1. Course title:
Waste Management
2. Course contents
1. Introduction to the subject matter – definition of waste (interpretations of Ministry of Environment)
2. Waste classification.
3. Inspection of Environment Protection as an authority controlling waste management.
4. Competence of government authorities as far as waste management is concerned.
5. Economic instruments in waste management.
6. Plans of waste management – establishment rules, plan elements.
7. Duties of waste holder.
8. Technical methods of waste neutralization.
9. Recycling, commercial reuse of waste.
10. Role of waste management in the system of environmental management.

3. Prerequisites:
General education at the level of secondary school.
4. Learning outcomes
Students are familiar with legal state of waste management in Poland, technical mathods of waste management and rules of establishing plans of waste management. They can implement acquired knowledge in a public administration workplace responsible for environment protection matters.
5. Recommended reading
Ustawa z dnia 27 kwietnia 2001 r. *Prawo ochrony środowiska* (Dz. U. Nr 62 poz.627) wraz z przepisami wykonawczymi
Ustawa z dnia 27 kwietnia 2001 r. *O odpadach* (Dz. U. Nr 62 poz.628) wraz z przepisami wykonawczymi
6. Type of course
Obligatory
7. Teaching team
Department of Environment Protection
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30/30	6	3
Classes		5	3
Seminar	60/60		
Total student's workload	120		

9. Assessment methods
exam
10. Language of instruction
Polish

ECTS credits
6

1. Course title:
Hydrology and Water Management
2. Course contents
1. Water occurrence and circle in nature. Water sources in the world and in Poland. Water deficiency.
2. Genesis, typology and environmental conditions of creation of underground water sources.
3. Occurrence, supply and hydrological regime. Water sources classification.
4. River systems: Diversity of moving water networks, water states, outflow measurement, river systems, lowland waters, high waters, floods.
5. Genesis, supply types, thermal conditions and fluctuations states of natural and artificial lakes. Swamps..
6. Seas and oceans: origin, chemical conditions and dynamics of waters, anthropogenic changes in marine environment.
7. Water balance on the Earth..
8. Forms and range of human interference in water cycle..
9. Disposal and renewal water resources.
10. Water retention in a catchments basin, methods of resources enrichment and reducing water deficiencies.
11. Flood risks and methods of prevention.
12. Water needs of communal economy and agriculture.
13. Water exploitation in sailing and power industry.
14. Degradation of surface and underground waters. – preventive methods, self-cleaning and recultivation..
3. Prerequisites:
General knowledge of Natural Sciences..
4. Learning outcomes
Students can describe and interpret hydrological processes and phenomena in relation to the state of environment in Poland; they can outline elementary hydrological characteristics; identify threats for water resources; evaluate systems of water resources protection; and make use of basic measurement techniques.
5. Recommended reading
Chełmicki W. *Woda Zasoby, degradacja*, Środowisko Wydawnictwo Naukowe PWN 2002 r.
Bajkiewicz-Grabowska E., Mikulski Z., *Hydrologia ogólna*, Wydawnictwo Naukowe PWN, Warszawa 1999.
Byczkowski A., *Hydrologia*, Wydawnictwo SGGW, Warszawa 1999.
Klugiewicz J. *Hydromechanika i hydrologia inżynierska* Oficyna Wydawnicza Projprzem-EKO, Bydgoszcz 1999
6. Type of course
Obligatory
7. Teaching team
Department of Environment Protection
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30	4	2
Classes			
Seminar	30		
Total student's workload	180		

9. Assessment methods
exam
10. Language of instruction
Polish

ECTS credits
2

1. Course title:
Civilization Threats and Balanced Development
2. Course contents
1.Influence of civilization development on particular elements of natural environment
2.Concept of balanced development.
3.Human influence on soil degradation:
4.Human activity as the main source of atmosphere pollution:
4.1 Greenhouse effect
4.2 Ozon hole
4.3 Acid rain
4.4 Smog.
5. Pollution of atmosphere and a human organism.
6.Legal measures for protecting atmosphere
7. Contamination of surface and underground waters.
8.Legal regulations on water protection.
9.Chemical polluters in food:
10.Legal regulations referring to food safety.
11.Endangered species of fauna and flora and their protection:
11.1 Protection of nature in Polish legislation
3. Prerequisites:
general knowledge of environment protection
4. Learning outcomes:
Student recognizes and understands the concept f balanced eco-development and can describe the most essential threats from the developing civilization
5. Recommended reading
Bednarek, *Badania ekologiczno gleboznawcze.* PWN Warszawa 2004.
Gaj H., *Energia i jej związki ze środowiskiem*. NFOŚi GW. Warszawa 1998.
Kowalik P., *Ochrona środowiska glebowego*. PWN Warszawa 2001.
Mikułowski M., *Ochrona przed szkodami powodowanymi przez czynniki atmosferyczne.* Wydawnictwo Świat Warszawa 2001.
6. Type of course
Obligatory
7. Teaching team
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30/20	V	3
Classes			
Seminars	30/20	V	3
Total student's workload			

9. Assessment methods: credit
10. Language of instruction
Polish

ECTS credits
4

1. Course title:
Organization of Environment Protection
2. Course contents
1. Concept of Environment, its protection and forming
2. Evidence of environmental protection, systems of legal regulation
3. Subjects organizing protection
4. Administrative and legal forms of protective activity: protection of water, air, grounds, natural resources, forests, etc.
5. General institutions of environment protection
6. Legal protection of environment in spatial planning
7. Legal responsibility in environmental protection: administrative, civil, penal, international.

3. Prerequisites:
General knowledge of natural sciences, Introduction to justiprudence
4. Learning outcomes:
Student knows legal regulation of environment protection; can practically apply environmental knowledge in jobs of public administration and business activity.
5. Recommended reading
Paczulski R., *Prawo ochrony środowiska*, Oficyna Wydawnicza Branta 1996
Pyłka- Gutowska E., *Ekologia z ochroną środowiska*, Warszawa 1997
Samborska – Boć E., Boć J., *Ochrona środowiska – źródła*, Wrocław 1994
6. Type of course: obligatory
7. Teaching team: Department of Environment Protection
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30/20	1	1
Classes	30/20	1	1
Seminars			
Total student's workload	90		

9. Assessment methods: exam
10. Language of instruction
Polish

Subjects for specialty - elective

ECTS credits
3

1. Course title:
Envirronment Chemistry
2. Course contents
Natural chemical processes happening in atmosphere.
Definition and properties of atmospheric air.
Definition of air pollution..
Natural and anthropogenic sources of air pollution.
Physical and chemical conditions of air pollution.
Physical and chemical conditions of air pollution alternations
Chemistry of water.
Classification of natural waters and their role in biosphere.
Physical and chemical properties of natural waters.
Characteristics of main anthropogenic substances in water environment..
Properties of drinking water.
Soil study.
Composition and physical and chemical properties of soil.
Chemical contamination of soil.
Chemical treatments in agriculture.
Chemical contamination of food.
Processes of waste disposal and their influence on environmental degradation.
3. Prerequisites:
General knowledge of Biology.
4. Learning outcomes
Students are familiar with chemical processes occurring in environment and they can implement this knowledge for the benefit of environmental ptrotection.
5. Recommended reading
Andrews J. E., *Wprowadzenie do chemii środowiska*, Wydawnictwa Naukowo-Techniczne, Warszawa 1999
O'Neill P., *Chemia środowiska,* Wydawnictwo Naukowe PWN, Warszawa 1998.
6. Type of course
Obligatory
7. Teaching team
Department of Environment Protection.
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30/20	3	2
Classes			
Seminar	30/20		
Total student's workload	90		

9. Assessment methods
lecture, laboratory - credit
10. Language of instruction
Polish

ECTS credits
3

1. Course title:
Eco-systems
2. Course contents
Basic terms and definitions.
Eco-system structure.
Ecological power industry.
Models of eco-systems functioning.
Water eco-systems.
Land eco-systems.
Ecology of cities and agricultural areas.
3. Prerequisites:
General knowledge of Biology.
4. Learning outcomes
Students are familiar with diversity of eco-systems on the Earth. They know ecological processes that influence varieties and changes in eco-systems.
5. Recommended reading
Andrzejewski R., i in., *Populacje roślin i zwierząt* - PWN
Begon M, i in., *Ekologia populacji* - PWRiL
Kalinowska A., Ekologia - *wybór przyszłości* - E.S
6. Type of course
Obligatory
7. Teaching team
Department of Environment Protection.
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30	3	2
Classes	30		
Seminar			
Total student's workload	90		

9. Assessment methods
lecture, classes - credit
10. Language of instruction
Polish

ECTS credits
4

1. Course title:
Economics in Environment Protection.
2. Course contents
1. Main problems of economics. Introductory issues.
2. Limitations of resources and productive possibilities.
3. Market, demand, supply.
4. Reaction of demand on changes of prices and income.
5. Basics of economic decisions of a producer.
6. Forms of competition. Extreme market structure.
7. Risk in business activity.
8. Public sector in economy. Economic role of government.
9. Account of national income..
10. Growth factors. Global demand and production at the level of balance.
11. Money and banking system.
12. Fiscal policy. J. M. Keynes's conception.
13. Labour market. Unemployment. Kinds and costs of unemployment.
14. Inflation. Concept of inflation and its costs. Philips's curve.
15. Open economy . Economic policy in open economy.
3. Prerequisites:
General knowledge of Economics.
4. Learning outcomes
Students are familiar with economics, including economics in environment protection.
5. Recommended reading
Czarny B., Czarny E., Bartkowiak R., Rapacki R. *Podstawy Ekonomii*, PWE Warszawa 1998.
Begg D., Fischer S. Dornsbuch R., *Ekonomia t.1*, t.2, PWE Warszawa 1995 i kolejne wydania.
6. Type of course
Optional
7. Teaching team
Department of Environment Protection.
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30	4	2
Classes	30		
Seminar			
Total student's workload	120		

9. Assessment methods
lecture, classes - credit
10. Language of instruction
Polish

ECTS credits
3

1. Course title:
Geo-engineering of Environment
2. Course contents
1. Introduction, elementary terms and definitions used in geo-engineering of environment.
2. Land division according to the way of creation.
3. Elementary physical and chemical properties of land.
4. Mechanical properties of building sites.
5. Water flow in soil.
6. Influence of frost on soil.
7. Methods of modification of foundation soil.
8. Designing and earthworks.
9. Geo-technical research of land, appointing soil features preparing geo-technical documentation.

3. Prerequisites:
General knowledge of Natural Science.
4. Learning outcomes
Students are familiar with soil improvements and soil material in land buildings or areas with disadvantageous geo-technical conditions that are planned for immediate location of buildings..
5. Recommended reading
S. Pisarczyk, Geoinżynieria. *Metody modyfikacji podłoża gruntowego*, Warszawa 2005.
Z. Wiłun, *Zarys geotechniki*, Wydawnictwa Komunikacji i Łączności, Warszawa 2000.
W. Bergemann, H. M. Schiechtl, *Inżynieria ekologiczna w budownictwie ziemnym*, Warszawa 1999.
S. Pisarczyk, *Gruntoznawstwo inżynierskie*, Warszawa 2001.
Wesołowski, Z. Krzywosz, T. Brandyk, *Geosentetyki w konstrukcjach inżynierskich*, Warszawa 2000.
Zadroga, K. Oleńczuk-Nejman, *Ochrona i rekultywacja podłoża gruntowego*, Gdańsk 2001.
H. Sawicka-Siarkiewicz, *Ograniczenia zanieczyszczeń w spływach powierzchniowych z dróg. Ocena technologii i zasady wyboru*, Warszawa 2003.
6. Type of course
Optional
7. Teaching team
Department of Environment Protection.
8. Course structure:

Form	Number of hours	Semester	Year
lectures	30	3	2
classes	30		
seminars			
Total student's workload	90		

9. Assessment methods
lecture, classes - credit
10. Language of instruction
Polish

ECTS credits
2

1. Course title:
Environmental dangers to health
2. Course contents
Environment protection as a constant task of European Union..
Legal basis of environment protection in European Union and Poland.
Main problems of rational exploitation of natural resources..
Tools and instruments of Polish ecological policy.
Costs and advantages of Polish integration with European Union. Health policy of the state regarding environmental influence on health.
3. Prerequisites:
General knowledge of Nature Protection
4. Learning outcomes
Students are familiar with min problems, thesis and elements of environment protection in European Union and Poland with particular attention to environmental protection of healh.
5. Recommended reading
Rada Ministrów „II Polityka Ekologiczna Państwa przyjęta przez Sejm w lipcu 2001."
Genowefa Grabowska „Europejskie prawo środowiska."
Aleksander Lipiński „Prawne podstawy ochrony środowiska."
Jan Boć, Konrad Nowacki, Elżbieta Samborska – Boć „Ochrona środowiska."
Czasopisma: „Aura", „Ekoprofit", „Przyroda Polska."
6. Type of course
Optional
7. Teaching team
Department of Environment Protection.
8. Course structure:

Form	Number of hours	Semester	Year
lectures		6	3
classes	15/12		
seminars			
Total student's workload	60		

9. Assessment methods
classes - credit
10. Language of instruction
Polish

ECTS credits
3

1. Course title:
Documentation of Processes of Environment Protection
2. Course contents
Introduction to the subject (definition and basics terms, etc.).
State of environment in Poland.
National monitoring of environment, (program and aims of monitoring, usage of monitoring results, exchanging data and information about environment.)
Collecting and disclosing data about environment within the framework of commonwealth's right for environment protection.
Space control and enforcement of international right for environment protection.
Documentation of environment protection issues in Polish jurisdiction.
System of plans and programs regarding environment on national level (central and main authorities of government administration)
System of plans and programs regarding environment on local level (governor and provincial government)
3. Prerequisites:
General knowledge of dealing with documentation.
4. Learning outcomes
Students possess ecological knowledge about domains of economic activity that bring pressure on environment in a form of direct or indirect exploitation of its resources as well as directions and methods of reducing that making use of the best available techniques BAT (Best Available Technique). They can appoint environmental conditions, rules and requirements necessary while creating, assessing and approving plans and programs of environment protection; documentation allowing to begin using installation having fulfilled requirements of environment protection, reports of influence of undertaking on environment, assessing this influence on environment, controlling and making documentation of environment state of quality, practical use of measurements and results of environment monitoring. They are able to pass the information about environment based on possessed materials and documents to the public.
5. Recommended reading
J. Jendrośka, M. Bar, *Prawo ochrony środowiska*, Wrocław 2005.
J. Boć, K. Nowacki, E. Samborska-Boć, *Ochrona środowiska*, Kolonia Limited 2003/2004.
Ochrona środowiska, pod redakcją Z. Brodeckiego, Warszawa 2005.
A. Bernaciak, *Ochrona środowiska w praktyce. Aspekty ekonomiczno-prawne*, Poznań 2004.
J. Ciechanowicz-McLean, *Ochrona środowiska w działalności gospodarczej*, Warszawa 2003.
6. Type of course
Optional
7. Teaching team
Department of Environment Protection.
8. Course structure:

Form	Number of hours	Semester	Year
lectures			
classes	15	5	III
seminars			
Total student's workload	90		

9. Assessment methods
credit
10. Language of instruction
Polish

ECTS credits
2/ sem.4 3/ sem.5 3/ sem.6

1. Course title:
Diploma Seminar
2. Course contents
1. Methodological workshops and selecting subjects of diploma theses – semester 4
2. Thesis, determining the problematic range of licentiate thesis – semester 3
3. Writing, reporting extracts from diploma theses and their assessment – semester 6

3. Prerequisites: Credit of general courses and some subjects of specialized curriculum
4. Learning outcomes:
Student is familiar with an organized cycle of writing diploma theses, research methods for diploma theses, uses creative writing techniques, is able to formulate the case himself/herself and can design research and result analysis
5. Recommended reading
Boć J., *Jak napisać pracę magisterską*, Kolonia Limited, Wrocław 2001
Pułło A., *Prace magisterskie i licencjackie. Wskazówki dla studentów*, PWN, Warszawa 2001
6. Type of course: obligatory
7. Teaching team: Department of Administration
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes	15,30,30 / 12, 24, 24	4,5,6	2,3
Seminars			
Total student's workload	120, 150, 180		

9. Assessment methods: credit
10. Language of instruction
Polish

ECTS credits
10

1. Course title:
Diploma Thesis
2. Course contents
Preparation of diploma thesis by a student according to the promotor's guidance
3. Prerequisites: Credits of previous semesters
4. Learning outcomes: Student graduates from the studies and obtains licentiate (Bachelor's) degree
5. Recommended reading
depending on the subject of diploma thesis
6. Type of course: obligatory
7. Teaching team: none
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes			
Seminars			
Total student’s workload	300		

9. Assessment methods: credit for diploma thesis
10. Language of instruction
Polish

ECTS credits
3/3

1. Course title:
Facultative seminars
2. Course contents
History of development of an enterprise (institution),
Legal regulations of enterprise (institution) functioning,
Organization structure,
Course of production and service processes,
Forms of organizing labour,
Economic and financial system,
System of motivating,
Size and structure of resources,
3. Prerequisites:
general knowledge of entrepreneurship
4. Learning outcomes:
Student posseses practical skills of performing office activities (administering).
5. Recommended reading
Bożena Klimczak, *Etyka gospodarcza*, Wydawnictwo Akademii Ekonomicznej we Wrocławiu, Wrocław 1996r.
Bogusław Sołtys, *Nazwy handlowe i ich ochrona w prawie polskim*, Kantor Wydawniczy Zakamycze, Kraków 2003r.
Dariusz Czajka, *Przedsiębiorstwo w kryzysie, upadłość czy układ*, Wydawnictwo Zrzeszenia Prawników Polskich, Warszawa 1999r.
Ann Marie Sabath, *Savioir – vivre w biznesie*, Wydawnictwo Amber Sp. z o. o. Warszawa 2004r.
6. Type of course: facultative
7. Teaching team: Department of Administration
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes			
Seminars			
other	160	4	II
Total student's workload			

9. Assessment methods: credit without a grade
10. Language of instruction
Polish

ECTS credits
1

1. Course title:
Monitoring of Environment
2. Course contents
Structure and organization of environment protection service in Poland.
Systems of monitoring environmentŁ aims and tasks, functioning rules:
Monitoring of air and sources of pollution;
Monitoring of surface waters;
Monitoring of underground waters;
Monitoring of soil and ground surface;
Monitoring of living nature;
Monitoring of dangerous waste.
Information systems of, collecting, processing and retrieving monitoring results.
Network for observing underground waters in the area of Poland: location of observation sites, tasks, functioning rules and result interpretation.
Regional and local monitoring; rules of organizing, functioning and result interpretation.
Integrated monitoring of environment (ZMP)
Current condition of natural environment in Province of Lower Silesia according to monitoring results.
3. Prerequisites:
Elementary knowledge of environmental protection.
4. Learning outcomes:
Student knows aims and tasks of environmental monitoring, basic methods of evaluating environmental pollution and condition of environment in the area of Lower Silesia.
5. Recommended reading
Program of environment monitoring in the period between 1998-2002 (org. Program monitoringu środowiska na lata 1998-2002), PIOS, Warszawa 1998.
Reports of National Inspection for Environment Protection, Condition of Environment in Poland, (org. Raporty Państwowej Inspekcji Ochrony Środowiska, Stan środowiska w Polsce), Warszawa.
Integrated Monitoring of Natural Environment in Poland (org. Zintegrowany Monitoring Środowiska Przyrodniczego w Polsce) , PIOS, Warszawa 1993.
Integrated Monitoring of Natural Environment. Organization rules, measuring system, selected methods of research, (org. Zintegrowany Monitoring Środowiska Przyrodniczego. Zasady organizacji, system. pomiarowy, wybrane metody badan), PIOS, Warszawa 1999.
Library of Environmental Monitorting (org. Biblioteka Monitoringu Środowiska), PIOS, Warszawa
6. Type of course: facultative
7. Teaching team: Department of Administration
8. Course structure:

Form	Number of hours	Semester	Year
Lecture	30/20	3	II
Classes			
Seminars			
other	30/20	3	II
Total student's workload	90		

9. Assessment methods: credit
10. Language of instruction
Polish

ECTS credits
2

1. Course title
Vocational training
2. Course contents
History of development of an enterprise (institution),
Legal regulations of enterprise (institution) functioning,
Organization structure,
Course of production and service processes,
Forms of organizing labour,
Economic and financial system,
System of motivating,
Size and structure of resources,
3. Prerequisites:
general knowledge of entrepreneurship
4. Learning outcomes:
Student posseses practical skills of performing office activities (administering).
5. Recommended reading
Bożena Klimczak, *Etyka gospodarcza*, Wydawnictwo Akademii Ekonomicznej we Wrocławiu, Wrocław 1996r.
Bogusław Sołtys, *Nazwy handlowe i ich ochrona w prawie polskim*, Kantor Wydawniczy Zakamycze, Kraków 2003r.
Dariusz Czajka, *Przedsiębiorstwo w kryzysie, upadłość czy układ*, Wydawnictwo Zrzeszenia Prawników Polskich, Warszawa 1999r.
Ann Marie Sabath, *Savioir – vivre w biznesie*, Wydawnictwo Amber Sp. z o. o. Warszawa 2004r.
6. Type of course: facultative
7. Teaching team: Department of Administration
8. Course structure:

Form	Number of hours	Semester	Year
Lecture			
Classes			
Seminars			
other	160	4	II
Total student's workload			

9. Assessment methods: credit without a grade
10. Language of instruction
Polish