



Universiteti “Nënë Tereza” - Shkup
Универзитет “Мајка Тереза” - Скопје
“Mother Teresa” University - Skopje

Description of the Study program

Curriculum and program for the first cycle of studies in Work and environment protection engineering, Faculty of Technical Sciences - UNIVERSITY MOTHER TERESA-SKOPJE

I Year
Winter semester I

	SUBJECTS	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.	Obligatory subjects	9+8	255	750	25
	Introduction to the principles of environmental protection	3+3	90	270	9
	Energy and environment	3+3	90	270	9
	Mathematics 1	3+2	75	210	7
	<i>Elective subject from List 1</i>				5
2.	Elective Subjects List 1	2+2	60	150	5
	Physics principles in WEPE	2+2	60	150	5
	The basics of computer technologies	2+2	60	150	5
	Foreign language 1 (English, German, French)	2+2	60	150	5
3.	Elective subject from the list of free elective subjects of the faculty	2+2	60	120	4
4.	Practical classes	2+0	30	60	2
TOTAL		17+4	315	900	30

I Year
Summer semester II

	SUBJECTS	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.	Required classes	9+8	255	720	24
	Modern analytical methods in environmental analysis	3+3	90	270	9
	Introduction to the principles of	3+3	90	270	9
	Mathematics 2	3+2	75	180	6
	<i>Practical classes</i>				2
	<i>Elective subject from List 2</i>				4
2.	Elective Subjects List 2	2+2	60	120	4
	Basic of statistics and statistical methods	2+2	60	120	4
	Foreign language 1 (English, German, French)	2+2	60	120	4



Universiteti “Nënë Tereza” - Shkup
Универзитет “Мајка Тереза” - Скопје
“Mother Teresa” University - Skopje

3.	Elective subject from the list of free elective subjects of the faculty	2+2	60	120	4
4.	Practical classes (required)	2+0	30	60	2
	Practical classes	2+0	30	60	2
TOTAL		17+4+2	345	900	30

II Year
Winter semester III

	SUBJECTS	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.	Obligatory subjects	9+8	255	750	25
	Sustainable energetic development	3+3	90	270	9
	Monitoring of the situation in the environment	3+3	90	270	9
	Dangerous and harmful substances	3+2	75	210	7
	<i>Elective Subjects from list 3</i>				5
2.	Elective Subjects List 3	2+2	60	150	5
	Construction and environment	2+2	60	150	5
	Sustainable usage of natural systems for protecting the environment	2+2	60	150	5
3.	Elective subject from the list of free elective subjects of the faculty	2+2	60	120	4
4.	Practical Subjects	2+0	30	60	2
TOTAL		17+4	300	900	30

II Year
Summer semester IV

	SUBJECT	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.	Obligatory subjects	9+8	255	720	24
	Mechanical engineering in environmental protection	3+3	90	270	9
	Thermodynamics	3+3	90	270	9
	Measurement and control of the pollution	3+2	75	180	6
	<i>Practical classes</i>				
	<i>Elective Subjects from List 4</i>				
2.	Elective Subjects List 4	2+2	60	120	4
	Energetic objects and environment	2+2	60	120	4



Universiteti “Nënë Tereza” - Shkup
Универзитет “Мајка Тереза” - Скопје
“Mother Teresa” University - Skopje

	Motors and ecology	2+2	60	120	4
3.	Elective subject from the list of free elective subjects of the faculty	2+2	60	120	4
4.	Practical Subjects (required)	2+0	30	60	2
	Practical Subjects	2+0	30	60	2
TOTAL		17+4+2	345	900	30



Universiteti “Nënë Tereza” - Shkup
Универзитет “Мајка Тереза” - Скопје
“Mother Teresa” University - Skopje

PROFILE A: Environmental protection engineering

III Year
Winter semester V

	SUBJECTS	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.	Obligatory subjects	6+6	180	480	16
	Legislation in the field of environment and safety and health at work	3+3	90	240	8
	Impact of the state of the environment on human health	3+3	90	240	8
	<i>Elective subject List 5</i>				6
	Elective subject from the list UMT				4
	Elective subject from the list UMT				4
2.	Elective Subjects List 5	3+2	75	180	6
	Purification of wastewater	3+2	75	180	6
	Procedures and plants for water treatment	3+2	75	180	6
3.	Elective subject from the list of free elective subjects of the faculty	4+4	120	240	8
	<i>Elective subject from the list UMT (table)</i>	2+2	60	120	4
	<i>Elective subject from the list UMT (table)</i>	2+2	60	120	4
4.	Practical Subjects	2+0	30	60	2
TOTAL		12+4+8	360	900	30

III Year
Summer semester VI

	SUBJECTS	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.	Obligatory subjects	6+6	180	540	18
	Basics of air protection	3+3	90	270	9
	Basics of water protection	3+3	90	270	9
	<i>Practical classes</i>				2
	<i>Elective subject from List 6</i>				6
	<i>Elective subject from the list of UMT</i>				4
2.	Elective Subjects List 6	3+2	75	180	6
	Methodology for drafting projects related to environment	3+2	75	180	6
	Acoustics and protection against noise and vibration	3+2	75	180	6
3.	Elective subject from the list of free elective subjects of the faculty	2+2	60	120	4



Universiteti “Nënë Tereza” - Shkup
Универзитет “Мајка Тереза” - Скопје
“Mother Teresa” University - Skopje

	<i>Elective subject from the list of UMT (table)</i>	2+2	60	120	4
4.	Practical Subjects (required)	2+0	30	60	2
	Practical Subjects	2+0	30	60	2
TOTAL		12+5+4+2	345	900	30

IV Year
Winter semester VII

	SUBJECTS	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.	Obligatory subjects	3+2	75	180	6
	Management and disposal of solid waste	3+2	75	180	6
	<i>Elective subject from List 7</i>	3+2	75	180	6
	<i>Elective subject from List 8</i>	3+3	90	270	9
	<i>Elective subject from List 9</i>	3+3	90	270	9
2.	Elective subject List 7	3+2	75	180	6
	Energy and renewable energy in rural areas	3+2	75	180	6
	Practicum of environmental protection with professional practice	3+2	75	180	6
3.	Elective subject List 8	3+3	90	270	9
	Decision making in the environment	3+3	90	270	9
	Renewable energy sources	3+3	90	270	9
	Modern methods for land remediation	3+3	90	270	9
4.	Hazardous waste management and recycling technologies	3+3	90	270	9
	Elective subject List 9	3+3	90	270	9
	Decision making in the environment*	3+3	90	270	9
	Renewable energy sources*	3+3	90	270	9
	Modern methods for land remediation*	3+3	90	270	9
5.	Practical Subjects	2+0	30	60	2
	Hazardous waste management and recycling technologies*	3+3	90	270	9
TOTAL		5+5+6+6	260	900	30

* not to repeat the subject from list 8

IV Year
Summer semester VIII

	SUBJECTS	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
--	----------	---------------------	-----------------	-----------------	------



Universiteti “Nënë Tereza” - Shkup
Универзитет “Мајка Тереза” - Скопје
“Mother Teresa” University - Skopje

1.	Obligatory subjects	6+4	150	420	14
	Fundamentals of fluid mechanics	3+2	75	210	7
	Modeling and Simulation in the WEPE	3+2	75	210	7
	<i>Elective subject from the list of UMT</i>				4
	<i>Practical education</i>				2
	Graduation thesis				10
2.	Elective subject from the list of free elective subjects of the faculty	2+2	60	120	4
	<i>Elective subject from the list of UMT</i>	2+2	60	120	4
3.	Practical education (required)	2+0	30	60	2
	Practical education	2+0	30	60	2
TOTAL		10+4+2	240	600	30

The candidate who successfully passed the exams from the first cycle of the undergraduate studies and presents the diploma thesis acquires the title of BSc in Environmental Protection

The part-time study program is realized with 50% of the Contact lessons envisaged in the regular study program. The organization of Contact lessons adapts to the student's time capabilities and lasts longer than the regular study program, but not longer than 2 academic years.



Universiteti “Nënë Tereza” - Shkup
Универзитет “Мајка Тереза” - Скопје
“Mother Teresa” University - Skopje

PROFILE B: Engineering for Occupational Safety and Health

III Year					
Winter semester V					
	SUBJECT	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.		6+6	180	480	16
	Obligatory subjects	3+3	90	240	8
	Hazards of workplace in the work environment	3+3	90	240	8
	<i>Elective subject from List 5</i>				6
	Elective subject from the list of UMT				4
	Elective subject from the list of UMT				4
2.	Elective subject List 5	3+2	75	180	6
	Designing of technical systems for protection at work	3+2	75	180	6
	Protection against noise and vibration in the industry	3+2	75	180	6
3.	Elective subject from the list of free elective subjects of the faculty	4+4	120	240	8
	Elective subject from the list of UMT (table)	2+2	60	120	4
	Elective subject from the list of UMT (table)	2+2	60	120	4
4.	Practical education	2+0	30	60	2
TOTAL		12+6+	330	900	30

III Year					
Summer semester VI					
	SUBJECTS	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.	Obligatory subjects	6+6	180	540	18
	Safety and safety at work with work equipment	3+3	90	270	9
	Theory and organization of education for occupational safety and health and professional practice	3+3	90	270	9
	<i>Practical Subjects</i>				2
	<i>Elective subject from List 6</i>				6
	Elective subject from the list of UMT				4
2.	Elective subjects List 6	3+2	75	180	6



Universiteti “Nënë Tereza” - Shkup
Универзитет “Мајка Тереза” - Скопје
“Mother Teresa” University - Skopje

	Professional risk, consequences and diseases	3+2	75	180	6
	Acoustics and protection against noise and vibration	3+2	75	180	6
3.	Elective subject from the list of free elective subjects of the faculty	2+2	60	120	4
	<i>Elective subject from the list of UMT</i>	2+2	60	120	4
4.	Practical education (required)	2+0	30	60	2
	Practical education	2+0	30	60	2
TOTAL		12+5+4+2	345	900	30

IV Year
Winter semester VII

	SUBJECTS	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.	Obligatory subjects	3+2	75	180	6
	Safety of working with machines for processing materials	3+2	75	180	6
	<i>Elective subject from List 7</i>	3+2	75	180	6
	<i>Elective subject from List 8</i>	3+2	75	270	9
	<i>Elective subject from List 8</i>	3+2	75	270	9
2.	Elective subject List 7	3+2	75	180	6
	Protection against the harmful influence of electricity. when applying electro-energy converters	3+2	75	180	6
	Safety and protection at work with el. plants and installations	3+2	75	180	6
3.	Elective subject List 8	6+6	180	540	18
	Occupational safety when performing construction work and systems	3+3	90	270	9
	Safety and protection at work with the means of communal and construction mechanization	3+3	90	270	9
	Safety in technological systems	3+3	90	270	9
	Industrial ecology	3+3	90	270	9
	Work safety in internal transport, transshipment and warehousing	3+3	90	270	9
	Safety and protection at work in agriculture and forestry	3+3	90	270	9
	Safety and safety at work on process plants	3+3	90	270	9
	Motor vehicles	3+3	90	270	9
4.	Practical education	2+0	30	60	2



Universiteti “Nënë Tereza” - Shkup
Универзитет “Мајка Тереза” - Скопје
“Mother Teresa” University - Skopje

TOTAL	5+5+12	260	900	30
--------------	---------------	------------	------------	-----------

IV Year
Summer semester VIII

	SUBJECTS	Lecture + Exercises	Contact lessons	Fund of lessons	ECTS
1.	Obligatory subjects	6+4	150	420	24
	Indicators of quality at work and environment	3+2	75	210	7
	Designing protection systems	3+2	75	210	7
	<i>Elective subject from the list of UMT</i>				4
	<i>Practical education</i>				2
	Diploma thesis				10
2.	Elective subject from the list of free elective subjects of the faculty	2+2	60	120	4
	Elective subject from the list of UMT	2+2	60	120	4
3.	Practical education (required)	2+0	30	60	2
	Practical education	2+0	30	60	2
TOTAL		10+4+2	240	600	30

The candidate who successfully passed the exams from the first cycle of the undergraduate studies and presents the diploma thesis acquires the title of BSc in Environmental Protection

The part-time study program is realized with 50% of the Contact lessons envisaged in the regular study program. The organization of Contact lessons adapts to the student's time capabilities and lasts longer than the regular study program, but not longer than 2 academic years.