UNIVERSITY OF PETROȘANI
FACULTY OF MINES

CURRICULUM

(valid starting with the academic year **2026-2027**)

Field: **Mines, Oil and Gas**

Study programme**: Occupational Safety and Health Management**

Duration of studies: **4 semesters**

Form of education: **full-time (IF)**

I. Requirements for obtaining the diploma

120 credits, of which:

- credits for compulsory subjects: **104**
- credits for optional subjects: **16**

10 credits for passing the dissertation examination

II. Course of studies (in number of weeks)

Year	Teaching activities		Exam sessions			Holiday		
	Sem. I	Sem. II	I	V	R	Winter	Inter-semester	Summer
Year I	14	14	3	3	3	3	1	12
Year II	14	14	3	3	3	3	1	-

III. Number of hours per week

	Sem. I	Sem. II
Year I	26	26
Year II	26	26

IV. Dissertation examination

Period for the dissertation examination: June-July session, September session
Content of the dissertation examination:

- Presentation and defence of the dissertation - **10 credits**

V. Method of choosing the optional subjects

One subject is chosen from the package of optional subjects for each semester

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OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT

Mission of the Occupational Safety and Health Management study programme

The Occupational Safety and Health Management study programme has a mission and objectives consistent with the declared mission of the University of Petroşani. The mission of the study programme is to ensure the professional training of master's students in the following competences: educational, research, development and professional training, communication, in accordance with the requirements of modern education for training specialists in ensuring the occupational safety and health of workers and the safety of mining and industrial processes and equipment. The study programme is characterised by opportunity elements in relation to the Classification of Occupations in Romania. Graduates of this programme can be employed in the following occupations: designated worker, head of the internal prevention and protection service, occupational safety and health management systems manager, labour inspector, pre-university teacher (module: occupational safety and health) or university teacher, occupational safety and health specialist, occupational health and safety management systems auditor, natural person authorised by the M.M.F.P.S. to provide services in the field of occupational safety and health.

Objectives of the Occupational Safety and Health Management study programme

The training of specialists is designed so that master's students can carry out their professional activity in the field of industrial safety, occupational health and safety, and fundamental or applied research. The process of training future specialists is designed to achieve the following objectives:

- developing occupational safety and health management projects by selecting, combining and using concepts, principles, regulations, standards and methods specific to the field;
- appropriate use of standard assessment criteria and methods for prevention activities and for the management of the occupational safety and health system;
- designing and providing technical assistance and operating work systems under safe and healthy conditions
- integrating safety and health principles into work processes by identifying and assessing occupational risks;
- ensuring the integrated management of occupational safety and health activities in the socio-economic environment;
- performing calculations, demonstrations and applications for solving tasks specific to risk management
- training specialists open to dialogue and concerned with their civic responsibilities.

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Faculty of **MINES**
Field **MINES, OIL AND GAS**
Study programme **OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT**

CURRICULUM

No.	YEAR I	Subject	Subj.	Semester 1				Semester 2				Credit points		Ei, Ci, Vi		No. of teaching hours per subject			Total individual study hours	Total subject hours
crt.	Subject	code	type	C	S	L	P	C	S	L	P	Sem.1	Sem.2	Sem.1	Sem.2	Lect.*	Appl.**	Total		
1	Legislative and Methodological Foundations of Occupational Safety and Health	UPFMMSSM101	DF	3	3							7		E1		42	42	84	91	175
2	Optional subject OP 11	UPFMMSSM102	DF	3		2						6		E1		42	28	70	80	150
3	Methods and Techniques for Occupational Risk Assessment	UPFMMSSM103	DF	3	2		1					7		E1		42	42	84	91	175
4	Mining Risk Assessment and Management	UPFMMSSM104	DF	3		2						6		E1		42	28	70	80	150
5	Ergonomic Work Organisation	UPFMMSSM105	DS	2	2							4		C1		28	28	56	44	100
6	Principles, Techniques and Procedures for Intervention and Rescue in Toxic / Explosive / Flammable Environments	UPFMMSSM106	DS					2		2			6		E2	28	28	56	94	150
7	Assessment and Prevention of Worker Exposure to Specific Risks	UPFMMSSM107	DS					2	2				6		E2	28	28	56	94	150
8	Occupational Health and Safety Management Systems	UPFMMSSM108	DS					2	2				6		E2	28	28	56	94	150
9	Work Accidents and Occupational Diseases in Industry	UPFMMSSM109	DS					2	2				5		C2	28	28	56	69	125
10	Professional internship	UPFMMSSM110	DS							10			7		C2	0	140	140	35	175
TOTAL YEAR I				14	7	4	1	8	6	12	0	30	30	7E + 3C		308	420	728	772	1500
												60								

* - Delivery mode: 50% Face to face (FF) and 50% Synchronous online (OS)
** - Delivery mode: 65% Face to face (FF) and 35% Synchronous online (OS)

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CURRICULUM

No.	YEAR II	Subject	Subj.	Semester 3				Semester 4				Credit points		Ei, Ci, Vi		No. of teaching hours per subject			Total individual study hours	Total subject hours
crt.	Subject	code	type	C	S	L	P	C	S	L	P	Sem.1	Sem.2	Sem.1	Sem.2	Lect.*	Appl.**	Total		
11	Fire and Explosion Prevention	UPFMMSSM211	DS	3		2						6		E3		42	28	70	80	150
12	Modern Risk Management Strategies and Policies	UPFMMSSM212	DS	3	2							6		E3		42	28	70	80	150
13	Auditing in Occupational Safety and Health	UPFMMSSM213	DS	3	2		1					7		E3		42	42	84	91	175
14	Collective and Individual Protection Measures, Methods and Means	UPFMMSSM214	DS	3		2						6		E3		42	28	70	80	150
15	Optional subject OP 21	UPFMMSSM215	DS	3	2							5		E3		42	28	70	55	125
16	Optional subject OP 22	UPFMMSSM216	DF					1	2				5		E4	14	28	42	83	125
17	Ethics and academic integrity	UPFMMSSM217	DC					1	2				5		C4	14	28	42	83	125
18	Internship for dissertation preparation	UPFMMSSM218	DS							12			12		C4	0	168	168	132	300
19	Preparation of the dissertation thesis	UPFMMSSM219	DS							8			8		C4		112	112	88	200
TOTAL YEAR II				15	6	4	1	2	4	20	0	30	30	6E + 3C		238	490	728	772	1500
												60								
	Elective subjects																			
20	Labour and Social Security Law	UPFMMSSM220	DFA	2	2							4		C3		28	28	56	44	100
21	Renewable Energies	UPFMMSSM221	DFA					2	1				3	C4		28	14	42	33	75

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DISTRIBUTION OF HOURS BY SUBJECT GROUPS						
Total lecture hours:			**546**			
Total application hours:			**490**			
Total hours:			**1456**			
Total lecture hours / Total hours (%) :	546	/	1456	x 100		37,50
Total application hours / Total hours (%) :	490	/	1456	x 100		33,65
Total lecture hours / Total application hours (%):	546	/	490			1,11
SUBJECT GROUPS			**No. hours**		**No. hours/Total hours (%)**	
Fundamental subjects DF			**350**		**24,0384**	
Specialisation subjects DS			**1064**		**73,0769**	
Complementary subjects DC			**42**		**2,8846**	
Elective subjects DFA			**98**		**6,7307**	
Optional subjects DOP			**182**		**12,50**	

REMARKS: For one credit point, 25 teaching and individual study hours are allocated

LEGEND: DF - fundamental subjects, DS - specialisation subject, DC - complementary subject, DFA – elective subject
C - lecture, S - seminar, L - laboratory, P - project, Apl - application hours
Ei, Ci, Vi - exam, colloquium, verification respectively in semester i, i =1 ÷ 4

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OPTIONAL SUBJECTS				
No.	Subject code	Year of study	Subject names	
2	OP 11	I	Natural Risks	Geotechnical Risks
14	OP 21	II	Safety Culture and Climate	Management of Prevention and Protection Activities
15	OP22	II	Work Psychology	Organisational Psychology

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Basic group from COR/ISCO-08/ESCO representative of the study programme Occupational Safety and Health Management

2141 - Industrial and production engineers

Target occupations from the representative COR/ESCO basic group of the study programme Occupational Safety and Health Management Health Management

214139 - Risk management auditor 214140 - Risk management specialist
214141 - Safety management systems auditor/assessor

Competences for the Occupational Safety and Health Management study programme

Professional competences

CP1. Uses effective communication techniques in professional and organisational contexts.
CP2. Identifies and formulates solutions to problems specific to occupational safety and health management.
CP3. Correlates the organisation's objectives with the requirements of occupational safety and health management systems.

CP4. Uses IT tools for the analysis, management and reporting of OSH data.
CP5. Applies work instructions and procedures specific to industrial and organisational activities.
CP6. Carries out scientific research activities in the field of occupational safety and health.
CP7. Evaluates the financial viability of prevention and protection measures and projects.
CP8. Applies the HACCP method and other methods for analysing risks and critical control points.
CP9. Manages process engineering activities from the perspective of occupational safety and health.

CP10. Analyses workplace ergonomics and its impact on workers' health.
CP11. Monitors the technical condition of equipment and installations in production units.
CP12. Identifies and applies the legal regulations and standards in force in the field of occupational safety and health.
CP13. Manages corrective and preventive actions resulting from assessments, audits and inspections.
CP14. Performs checks and inspections of industrial equipment.

CP15. Analyses and interprets data from tests, measurements and specialist investigations.

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CP16. Collects and manages technical information relevant to OSH activities.
CP17. Interacts professionally in research environments and in interdisciplinary professional contexts.
CP18. Manages data and information specific to research and professional development activities.
CP19. Ensures own continuous professional development and that of the organisation's staff.
CP20. Ensures the health and safety of workers in production and service processes.
CP21. Interprets technical and regulatory requirements applicable to industrial processes.
CP22. Ensures the continuous preparation of the organisation for internal and external audits.
CP23. Identifies legal requirements applicable to the activities carried out.
CP24. Inspects industrial equipment and installations from the perspective of occupational safety and health.
CP25. Applies occupational health and safety standards.
CP26. Applies safety management principles in organisational activities.
CP27. Complies with and ensures compliance with legal regulations in the field of occupational safety and health.

Transversal competences

CT1. Thinks analytically and critically when analysing complex situations.
CT2. Applies scientific, technological and engineering knowledge in real professional contexts.
CT3. Works effectively in multidisciplinary teams.
CT4. Complies with legal, ethical and professional regulations.
CT5. Complies with and promotes workplace safety and health rules.

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Learning outcomes for the Occupational Safety and Health Management study programme

KNOWLEDGE

C1. The graduate can analyse and interpret advanced concepts of risk management and integrated risk assessment.
C2. The graduate can identify and describe relevant international standards and their application in management systems.
C3. The graduate can explain advanced methodologies for assessing and controlling occupational and technological risks.
C4. The graduate can interpret national and European legislation in the field of occupational safety and health.
C5. The graduate can identify models of organisational culture and leadership tools in the field of safety.
C6. The graduate can explain the functioning of technological risk detection, monitoring and control systems.
C7. The graduate can analyse the psychosocial, ergonomic and organisational mechanisms influencing OSH performance.

SKILLS

A1. The graduate is able to apply advanced methodologies for risk assessment, analysis and treatment.
A2. The graduate is able to develop and implement strategic occupational safety and health policies and programmes.
A3. The graduate is able to model and simulate major risk scenarios.
A4. The graduate is able to evaluate the effectiveness of control measures and propose risk reduction solutions.
A5. The graduate is able to investigate work accidents and incidents.
A6. The graduate is able to use modern audit and organisational analysis tools.

RESPONSIBILITY AND AUTONOMY

RA1. The graduate can coordinate the development and implementation of integrated management systems (OSH–Environment–Quality–Risk).
RA2. The graduate can take on the responsibilities of auditor, specialist or consultant in the field of OSH.
RA3. The graduate can manage complex projects for prevention and optimisation of organisational processes.
RA4. The graduate can lead strategic reporting and risk communication activities.
RA5. The graduate can coordinate staff training and the development of a safety culture.
RA6. The graduate can evaluate the performance of management systems and propose continuous improvements.
RA7. The graduate can lead applied research activities and the implementation of good practices in the field of OSH.

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