

## MSc in Petroleum Geoengineering program

- Programme title: Petroleum Geoengineering masters course (MSc)
- Degree awarded: Petroleum Geoengineer
- Number of semesters: 4; number of contact hours: 1148; required number of credits to be completed: 120
- Field practice: Minimum 4 weeks internship at a mining company, research institute or competent authority.

### PROGRAMME OVERVIEW

Basic courses in natural sciences – NS; Economic and human courses – EH; Basic professional courses – BP, Differentiated professional courses - DP)

semester	course	type	Course code	lect.	prac.	ECTS	Assign	Course leader
1	Structural geology	NS	MFFTT710004	1	2	3	p.m.	Dr. Németh Norbert
1	Stratigraphy	NS	MFFTT710005	2	1	3	exam	Dr. Less György
1	Sedimentology of carbonate reservoirs	NS	MFFTT710006	1	1	2	exam	Dr. Velledits Felicitász Margit
1	Introduction to applied geophysics	NS	MFGFT7100052	2	1	3	exam	Dr. Vass Péter
1	Introduction to petrophysics	NS	MFGFT710006	2	1	3	exam	Dr. Szabó Norbert Péter
1	Applied petrology	NS	MFFAT710008	2	1	3	exam	Dr. Má dai Ferenc
1	Oilfield hydrogeology	BP	MFKHT730014	2	1	3	exam	Dr. Szűcs Péter
1	Geostatistics	BP	MFGFT710007	2	1	3	exam	Dr. Szabó Norbert Péter
1	Drilling engineering, HSE	BP	MFKOT710010	2	2	4	p.m.	Dr. Al-Nezari Dhorgham Skban Ibrahim
	Elective course 1.	EH		0	2	2	p.m.	
1	Introduction to geophysical scientific literature		MFGFT710008					Dr. Szabó Norbert Péter
1	Graduate research seminar		MFFAT720007					Dr. Má dai Ferenc
						29		
2	Basin modeling	BP	MFFAT720011	2	2	4	p.m.	Dr. Má dai Viktor
2	Exploration seismic techniques and interpretation	BP	MFGFT720016	2	2	4	exam	Dr. Fancsik Tamás
2	Petrophysics-Well log interpretation	BP	MFGFT720019	2	2	4	exam	Dr. Vass Péter
2	Exploration geochemistry of hydrocarbons	BP	MFFAT720012	2	1	3	exam	Hámorné Dr. Vidó Mária
2	Geothermal systems and transport modeling	DP	MFKGT20016	2	1	3	exam	Dr. Tóth Anikó Nóra
2	Oilfield Chemistry	BP	MFKOT720011	2	1	3	exam	Dr. Lakatos István János
2	Analysis of petroleum systems, prospect evaluation	DP	MFFAT730003	0	2	2	p.m.	Kiss Károly

semester	course	type	Course code	lect.	prac.	ECTS	Assign	Course leader
2	Core analysis	DP	MFFAT720015	0	3	3	p.m.	Dr. Velledits Felicitász Margit
2	Sedimentology of clastic reservoirs	DP	MFFTT720005	2	1	3	exam	Dr. Juhász Györgyi
						29		
3	Estimation of resources/reserves	DP	MFFAT720014	1	1	2	p.m.	Kiss Károly
3	Reservoir geology and modelling	DP	MFFAT730002	2	1	3	exam	Dr. Má dai Viktor
3	In-field seismic techniques and interpretation	DP	MFGFT730012	1	3	4	p.m.	Dr. Gombár László
3	Petroleum economics	DP	MFKOT730022	2	0	2	p.m.	Dr. Komlósi Zsolt
3	Wellsite geology	BP	MFFTT710007	1	2	3	p.m.	Balogh József
3	Planning, implementing and managing E&P projects	DP	MFFAT730005	1	1	2	p.m.	Dr. Má dai Ferenc
3	Reservoir and production engineering	DP	MFKOT730023	3	1	4	exam	Dr. Turzó Zoltán
3	Project work	DP	MFFAT730006	0	8	8	p.m.	Dr. Less György
	Elective course 1.	DP		1	1	4	p.m.	
3	X-ray diffraction applications for petroleum geology		MFFAT730008					Dr. Kristály Ferenc
3	Basic data processing methods for oilfield geophysics and petrophysics		MFGFT730013					Dr. Turai Endre
3	Computer-aided well log analysis		MFGFT73012					Dr. Vass Péter
						32		
4	Thesis work I.	DP	MFGFT740003			18		
4	Thesis work 2	DP	MFFTT740002			12		
						30		

### Graduation requirements:

- Students must have completed all the core, specialization and elective course requirements.
- Students must have achieved a minimum of 180 credits.
- Students will have successfully completed the mandatory internship.
- Students will have submitted a Thesis Work.
- Students will have fulfilled all administrative and financial requirements towards the university.

Graduation comprises two parts: the defend of the Thesis Work and passing final exams.

The final exam is an oral exam, discussing the the following topics:

- Integration of geophysical and geological methods in exploration
- Implementation of exploration projects
- Integration of geosciences and engineering

The overall result of the final examination (ZV) is calculated as:

$$ZV = \frac{\frac{A1+A2+A3}{3} + D}{2}$$

where:

- D = the final grade of the Thesis work, defined by the examination board,
- A1, A2 and A3 = grades of the three exams.
- Grades are integer numbers and given on a scale from 5 (the highest grade) to 1 the lowest grade). The lowest passing grade is 2.