

CURRICULUM
Program: **APPLIED GEOPHYSICS** (in English Language)

Level: Master Degree (M.Sc.)

Domain of M.Sc. studies: Geological Engineering

Duration of studies: 4 semesters (120 credits)

Year I - Semester 1

Item	Courses	Type ¹	Code	Hours/week and number of credits			Form of graduation (exam/verification)
				Course	Lab	Credits	
COMPULSORY COURSES							
1	Academic Ethics and Deontology	C	AGPH-01	1	-	3	Verification
2	Seismic Exploration for Hydrocarbons (I)	S	AGPH-02	1	1	5	Exam
3	Unconventional Hydrocarbons Resources	S	AGPH-03	1	2	5	Exam
4	Mining Geophysics	S	AGPH-04	1	1	4	Exam
5	Borehole Geophysics for Groundwater and Solid Mineral Resources	A	AGPH-05	2	2	6	Exam
	Professional Practice Stage (I) (30 hrs)	A	AGPH-06	-	-	2	Verification
OPTIONAL COURSES²							
6	(a) Advanced Seismic Acquisition Technology	A	AGPH-07	1	1	5	Exam
	(b) Gravity and Magnetic Exploration of Sedimentary Basins	A	AGPH-08				
TOTAL				7	7	30	

¹ - One of the options: S = Synthesis discipline; A = Advanced discipline; C = Complementary discipline

² - One course to be selected out of two
Educational activities (28 hours / week): 7 weeks



Rector
Prof. Dr. Marian Preda

Director, Department of Geophysics
Assoc. Prof. Dr. Bogdan Niculescu

Program Manager
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Prof. Dr. Lucian Petrescu

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Year I - Semester 2

Item	Courses	Type ¹	Code	Hours/week and number of credits			Form of graduation (exam/verification)
				Course	Lab	Credits	
COMPULSORY COURSES							
1	Seismic Exploration for Hydrocarbons II	S	AGPH-09	1	1	5	Exam
2	Data Acquisition and Processing in Shallow Seismics	A	AGPH-10	1	1	4	Exam
3	Marine Geophysics	S	AGPH-11	1	1	5	Exam
4	Quantitative Well Log Interpretation	A	AGPH-12	1	1	4	Exam
5	Advanced Geophysical Data Processing	A	AGPH-13	2	2	6	Exam
	Professional Practice Stage (II) (30 hrs)	A	AGPH-14	-	-	2	Verification
OPTIONAL COURSES²							
6	(a) Exploration for Subtle Traps in the Petroleum Systems of Romania	A	AGPH-15	1	1	4	Exam
	(b) Oil and Gas Geological Traps	A	AGPH-16				
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Year II - Semester 3

Item	Courses	Type ¹	Code	Hours/week and number of credits			Form of graduation (exam/verification)
				Course	Lab	Credits	
COMPULSORY COURSES							
1	Geophysical Investigation and Monitoring in Environmental Studies	A	AGPH-17	1	1	5	Exam
2	Geophysics for Geotechnical Engineering	A	AGPH-18	1	1	4	Exam
3	Geophysics for Archaeology	A	AGPH-19	1	1	4	Exam
4	Geophysical Investigation of Active and Passive Continental Margins	S	AGPH-20	2	2	6	Exam
5	Tectonophysics	S	AGPH-21	1	1	5	Exam
	Professional Practice Stage (III) (40 hrs)	A	AGPH-22	-	-	2	Verification
OPTIONAL COURSES²							
6	(a) Seismic Stratigraphy	A	AGPH-23	1	1	4	Exam
	(b) Electromagnetic Methods in Geophysics	A	AGPH-24				
TOTAL				7	7	30	

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Year II - Semester 4

Item	Courses	Type ¹	Code	Hours/week and number of credits			Form of graduation (exam/verification)
				Course	Lab	Credits	
COMPULSORY COURSES							
1	Georadioactivity and Radioactive Contamination	S	AGPH-25	1	1	5	Exam
2	Monitoring of Faults and Engineering Constructions	A	AGPH-26	1	1	5	Exam
3	Toxic and Radioactive Waste Disposal	A	AGPH-27	1	1	5	Exam
4	Hydrogeological Investigation of Aquifers	A	AGPH-28	1	1	5	Exam
	Research Stage for M.Sc. Thesis Defense (350 hrs)	A	AGPH-29	-	-	10	Verification
TOTAL				4	4	30	
ELECTIVE COURSE							
1	Wavelet Transform in Seismic Data Processing	A	AGPH-30	1	1	5	Verification
M.Sc. Thesis Defense						10	

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