



Università degli Studi di Perugia
Master of Science (MSc) in Petroleum Geology
(Laurea Magistrale in Geologia degli Idrocarburi)

Aim of the Course

The MSc in Petroleum Geology (Laurea Magistrale in Geologia degli Idrocarburi) is a two-years multidisciplinary course covering a range of earth science and related subjects, and their application to the exploration and production of hydrocarbons. The course is intended to prepare students for professional positions in the petroleum industry, environmental and geotechnical consulting industries, government agencies and for graduate studies at the doctoral level. The course has been structured in close collaboration with **Eni** and **ECU (Eni Corporate University)**.

The programmed curriculum will provide the students with a strong understanding of geology, sedimentary geology, structural geology and geophysics in relation to petroleum habitats and exploration with an emphasis to applying current concepts, methods and technologies (e.g. basin analysis, sequence stratigraphy, petroleum systems modelling, seismic interpretation) to hydrocarbon basins.

Main objective is to produce technically qualified, well-rounded petroleum geoscientists with the potential to become leaders of industry; additionally, this is also a course option for graduates wishing to develop knowledge and skills for careers as geoscientists.

At the end of the two-years course, the graduates should be able to apply the fundamentals of geosciences to solve geosciences related problems; analyse and synthesize using problem solving skills; demonstrate effective communication and management skills; engage in lifelong learning and professional development.

During the two-years courses people from Eni Oil Company will give seminars and practical courses on topics strictly related to the hydrocarbon geology.

An integral part of the training regards fieldwork, which is used to consolidate the students understanding by applying classroom-taught concepts in the field. Fieldtrips are taken to areas of outstanding geological interest that illustrate the full breadth of petroleum geoscience.

After the exams, students undertake an independent project (Thesis), under the supervision of a tutor. This independent project provides students with the opportunity to improve their specialist knowledge in a particular area or topic, and/or to gain work experience in an oil company.

Students are expected to demonstrate independent thinking, critical and creative analysis, and sound technical judgment in their project work, and to manage both the technical analysis and time-management aspects of the project.

Outline of the MSc in Petroleum Geology

The normal extent for obtaining the Master's Degree is two years. In order to achieve the final title, the student must have acquired 120 credits (CFU), 60 CFU for each year of the course. Each credit corresponds to 25 hours of work of the student. For each training credit, the number of hours devoted to different types of educational activities, in view of the different variable commitment (personal study) required students from the assets is determined as follows:

Frontal lectures:	7 hours;
Practice in the classroom or lab	12 hours;
Tutorial on the ground:	usually 2 days;
Internships, preparation of the final Project and written Thesis.	25 hours.

The two academic years path (2016-2018) is organised in 4 semesters as here below reported; during the fourth semester a Stage period (12 weeks at least) will be spent in Industry or at the University or other approved Agencies, to undertake a multidisciplinary project on oil business items: the relevant written report will constitute the final dissertation and the MSc Thesis to be presented during the Degree examination session (Laurea). The final assessments, of each course, will be taken at the end of each semester.

Academic Calendar

The educational activities during the 2 academic years 2016-2018 are divided into two semesters; during the first year 2016-2017 the scheduled activities are:

semester	Lectures	assessments	number of exam sessions
1st	from 03/10/2016 to 20/01/2017	from 14/12/2016 to 21/12/2016	1
		from 23/01/2017 to 28/02/2017	2
2nd	from 01/03/2017 to 09/06/2017	from 19/04/2017 to 24/04/2017	1
		from 12/06/2017 to 31/07/2017	2
		from 04/09/2017 to 30/09/2017	2

LM Petroleum Geology Teaching path cf. 2016-17 Teaching regulation

Ist year (2016-2017)

Type of activity	Course	CFU	Courses and teaching staff
I semester (October – January)			
Fundamental	Sedimentology	9	S. Cirilli
Fundamental	Applied Geophysics	9	M. Ercoli
Fundamental	Global Tectonics	6	M. Barchi
II semester (March – June)			
Fundamental	Seismic Interpretation	6	G. Minelli
Fundamental	Integrated Stratigraphy	6	A. Spina
Fundamental	Applied Geochemistry	6	C. Cardellini
Fundamental	Structural Geology	9	G. Minelli
Student option	1 optional course, chosen by the student during the first or second semester	6	
Other formative activities:			
Supplementary educational activity	Seminars held by specialists from ENI Oil Company - Introduction to petroleum geology - Seismic interpretation and exploration - Geochemistry and petroleum geology Geological Field trips	3	

IInd year (2017-2018)

Type of activity	Course	CFU	Courses and teaching staff
I semester (October – January)			
Fundamental	Petroleum Geology – mod. 1 (Exploration and Petroleum System Modeling)	6	E. Capezzuoli
	Petroleum Geology – mod. 2 (Petrophysics and Reservoir Geology)	6	M. Porreca

Fundamental	G.I.S. Geographical Information Systems	6	P. De Rosa
1 option between	Micropaleontology	6	R. Rettori
	Hydrogeology	6	W. Dragoni
Student option	1 optional course, chosen by the student during the first or second semester	6	
II semester (March – June)			
Final assessment	Final Exam (Thesis)	27	
Other formative activities:			
Supplementary educational activity	Seminars held by specialists from ENI Oil Company - <i>Petrophysics and Well Log Interpretation</i> - <i>Petroleum System Modelling</i> - <i>Exploration and Production activities workflow</i>	3	

The courses available as optional (in English) in the A.A 2016-2018 are:

Additional courses held in english	Semester	CFU	Courses and teaching staff
Sedimentary Petrography	available in the first semester	6	S. Cirilli
Reservoir Geology	available in the second semester of the II° year	6	C. Sala

As reported in the University Regulations, student must apply his own study plan before 28th February 2017 using the Departmental form available at <http://www.fisgeo.unipg.it/joo3x/index.php/it/didattica/corsi-di-laurea-in-geologia> and indicating the student options exams.

However, to allow that the student may attend optional exams also during the first half of the first year, it is recommended to complete the study plan simultaneously with the application submission.

Teaching methods and Assessment

Due to the fact that the course is entirely delivered in English, it is required knowledge of English language corresponding to the European level B1 or equivalent, properly certified.

The training activities will be implemented in several ways, such as teaching front, the practical work in the classroom and in the laboratory, ground exercises, seminars, training courses, individual study and assisted. The exercises are intended to develop the student's ability to solve problems or to acquire skills of technical and practical exercises are especially important for field and laboratory. The exercises, which will also include group activities, will also allow the teacher to verify, during the course of each course, the levels of student learning and achievement of learning goals. The Study provides the opportunity for training abroad under the Erasmus exchange agreements and Erasmus Placement.

Attendance at lectures is strongly recommended for all courses; attendance at tutorials on the field and in the laboratory, in the framework of the teachings and that of the training activities and seminars (excursions and exercises of land and interdisciplinary eni's seminars) are mandatory.

The credits are acquired prior positive assessment of profit (examination). Evaluations have individual character and may consist of written and/or oral and/or exercises to be performed in the laboratory or in the field. All activities that allow the acquisition of credit must be assessed. The evaluation of the course units and related integrative and is expressed by specific committees, consisting of at least two teachers, including the head of the educational activity. The assessment is expressed out of thirty. For the "other activities" assessment generally consists in a judgment. Teachers can perform assessments during the courses. These tests have the primary aim to monitor student in learning and to assist individual study; checks must be organized in ways and times that do not interfere with teaching activities of the same semester. The results of these tests can be used by teachers to exempt deserving students from one part of the final exam. The composition of the examination boards and calendars examinations are approved by the Committee Coordination of Courses of Study (CCCS) and published at the beginning of the academic year. In case of justified grounds, the teacher in charge may postpone the date of an exam.

Workers and Part-time Students

Workers and Part-time students may apply to the Coordinator of CCCS illustrating their own training need. Students enrolled as part-time students will have an individual study plan that provides for different articulation of the training course and educational activities ad hoc.

Pre-Requisites

Curricular pre-requisites are:

- Bachelor Degree (preferably in Geology)
- Basic training in mathematics, physics and chemistry and at least a basic knowledge in geosciences.
- English proficiency certificate for non-English mother tongue.

In order to allow the pre-evaluation process, students must submit **before mid-May 2016**:

- Bachelor Degree (translated in English or Italian).
- Transcript (in English, any format).
- Motivation Letter (in English, any format).
- English proficiency certificate for non-English mother tongue (see below).

Applications may be sent by post to Dr. Marta Alunni Pini at:

Dipartimento di Fisica e Geologia,
Via Pascoli
06123 Perugia

or by electronic mail to:

marta.alunnipini@unipg.it.

Applications will be evaluated by a committee of the Department of Physics and Geology, University of Perugia in order to ascertain whether the requirements for admission have been met.

Transfers

Procedures and criteria for the recognition of credits acquired in other courses of study.

As for the recognition of credits, the requests submitted by individual students will be examined by the CCCS and the credits earned will be evaluated taking into account the general criteria set out below.

If coming from study programs of the same class, CCCS will recognize every credit earned by the student in the previous curriculum. If coming from different class courses, CCCS will evaluate the appropriateness of disciplines and content of the courses in which the student has acquired credits: credits attributable to the subject areas, ranging from the teachings characteristic, provided into the Master of Science in Petroleum Geology, will normally be approved by the Committee.

The CCCS will provide assistance to the student in compiling an individual study plan.

The credits earned by students in the context of international study programs at Universities in force of bilateral contracts with the University of Perugia will be recognized with reference to the European Credit Transfer System (ECTS). Credits earned by students at other Italian Universities, European Union or in other countries who do not follow the ECTS system, will be recognized on the basis of the documentation provided by the student. In the event of a bilateral agreement between the University of Perugia and the establishment of origin, we will proceed in accordance with the terms of the agreement.

Previously acquired knowledges and professional skills, not corresponding to particular teaching course, will be checked by CCCS regarding the consistency with the objectives of the degree course, in any case within a maximum of 12 credits.

Final exam

The final exam consists in checking the ability of the student to work independently and to expose and discuss the results of an original work (Thesis), any experimental or theoretical, on a specific theme, topic, even in research context. The thesis is carried out with the supervision of a teacher belonging to the Perugia teaching staff of the Geological Courses (Supervisor), possibly together with one or more co-Supervisors and discussed by the student in the presence of a special committee appointed by the educational structure of reference. The co-Supervisor must be experts in the topic of the thesis and not necessarily an academic staff.

The thesis will be written in Italian (with extended abstract in English) or in English (with extended abstract in Italian). The Committee will be composed of 7 teachers, relating to the educational structure of reference and will normally include the thesis Supervisor.

In the assessment of the dissertation, the Committee will verify the ability of the student to work independently and to expose and discuss the results of an original work, experimental or theoretical, on a specific topic which follows to the training of the student. The criteria for the evaluation and the final score for the award of degree, will take into account

the career of the student, timing and acquisition of credits, the quality of the Thesis and its presentation. At the final examination will be awarded up to ten points, that will be added to the base score resulting from the weighted average of the tests carried out by the students during the two years of the course. If after the increase in the rating is equal to or greater than 110, the Committee, only if unanimously, may give praise.

Tutoring

The tutorial activities are organized and managed by a coordinator appointed by the CCCS. At the beginning of each academic year, students enrolled are assigned to teachers who are responsible (Tutors), in number of 3, which will follow the entire educational carrier.

The tutors for the Academic Years 2016-18 will be Prof. Giorgio Minelli, Dr. Enrico Capezzuoli and Dr. Massimiliano Porreca.

The tutors can be helped by deserving students pursuant to art. 2 of D.M. 198/03.

The tutoring service includes:

- collective services, organized by the Coordination Committee of the Study, among them: first reception (presentation and information on educational facilities), or initiatives aimed at groups of students with similar needs (eg. meetings held at the beginning of each academic year to verify the academic calendars information on study or how to participate to field trips);
- individual services, held by the Tutors, which essentially consist in listening to the problems in learning and suggest to the students appropriate solutions. Students can always ask for information and insights the Head of Tutoring and the Coordinator of the Committee.

With regard to services aimed at improving their graduate employment, the Coordination Committee of the Study annually organizes seminars and meetings with the main public and private actors, who are interested in the professional skills of the geologist (professional geologists, government, mining, etc.); students can also take advantage of services offered by the University. Moreover, in agreement with Eni E&P Division and Eni Corporate University, the CCCS organizes annual seminars both at its headquarters and at eni, visits to eni laboratories and facilities, and meetings with experts from various fields to illustrate the specific skills required by the market and in order to address and plan for short-and long-term training offer.

Minimum language requirements for the admission

IELTS International English Language Testing System http://www.ielts.org	Cambridge ESOL Examinations General English Exams http://www.cambridgeenglish.org/exams	TOEFL Test of English as a Foreign Language http://www.ets.org/toefl		
5.0	Council of Europe Level B1 score 55-59* Cambridge English: PRELIMINARY (PET) Pass *see the Statement of Results to verify the score	TOEFL ibt Internet-based Test	TOEFL cbt Computer-based Test	TOEFL pbt Paper-based Test
		77-86	210-227	547-567

Exemption from the English language certificate

Applicants in one of the following conditions could be exempted from the submission of an English language certification:

- attendance of a least one year of studies in the English language in a High/Secondary School; or
- possess of an educational qualification acknowledged as equivalent to the Italian High School Diploma, issued by a High/Secondary School where classes are held in the English language; or
- possess of a Bachelor (or equivalent) degree obtained in a University where classes are held in the English language.

In order to be exempted from the submission of an English language certification, applicants must enclose an official declaration/certification, on headed paper and duly printed, attesting one of the abovementioned conditions and clearly specifying "the medium of instruction is English".

Candidates who are not able to present a language certification, or equivalent declaration, upon arrival in Perugia will not be enrolled.

COORDINATOR OF THE STUDY COURSE
Prof. Simonetta Cirilli