



Università degli Studi di Perugia  
**Master of Science (MSc) in Petroleum Geology**  
Academic Years: 2018-2020

### **Aim of the Course**

The MSc in Petroleum Geology is a two-years multidisciplinary course covering a range of subjects related with Earth Science, and their application to hydrocarbon exploration and production. The course is intended to prepare students for professional positions in the oil companies, 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-ECU (Eni Corporate University)**.

The educational program will provide the students with an in-depth knowledge of geology, sedimentary geology, structural geology and geophysics related to petroleum environment and exploration with emphasis in application of current concepts, methods and technologies (e.g. basin analysis, sequence stratigraphy, petroleum systems modelling, seismic interpretation) to hydrocarbon basins.

The main purpose of this Master Course is to form technically qualified, complete petroleum geoscientists with the potential to become company leaders; additionally, it is also an alternative course for graduates wishing to develop knowledge and skills for career as geoscientists.

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

During the two-years courses experts from Eni Oil Company will supply 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 in support of the full understanding 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 subject or topic, and/or to gain work experience in an oil company.

Students are expected to demonstrate independent thinking, critical and creative analysis, 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 student work. For each training credit, considering the different variable commitment (personal study) required, the corresponding number of hours is determined as follow:

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-years academic path (2018-2020) is organised in 4 semesters. The fourth semester is devoted to prepare the Master thesis. Students can choose to carry out their thesis project at the Department of Physics and Geology of this University or to apply for a stage in Industries, Research Centres and foreigner Universities (in the frame of the Erasmus Program). In all the cases the final dissertation of the MSc Thesis will be defended at the Perugia University with at least a tutor from the Perugia teaching staff.

## Academic Calendar

The educational activities during the 2 academic years (2018-2019 and 2019-2020) are divided into two semesters. During the first year 2018-2019 the scheduled activities are:

Semester	Lectures	Assessments	Number of exam sessions
1st	I year - from 01/10/2018 to 18/01/2019	from 30/11/2018 to 07/12/2018	1
	II year - from 24/09/2018 to 18/01/2019	from 21/01/2019 to 28/02/2019	2
2nd	from 04/03/2019 to 07/06/2019	from 23/04/2019 to 03/05/2019	1
		from 10/06/2019 to 31/07/2019	2
		from 02/09/2019 to 27/09/2019	2

### **LM Petroleum Geology Teaching path cf. 2017-19 Teaching regulation**

#### ***I year (2018-2019)***

Type of activity	Course	CFU
------------------	--------	-----

#### ***I semester*** (October – January)

Fundamental	Sedimentology	9
Fundamental	Applied Geophysics	9
Fundamental	Global Tectonics	6

#### ***II semester*** (March – June)

Fundamental	Seismic Interpretation	6
Fundamental	Applied Geochemistry	6
Fundamental	Structural Geology	9
Fundamental	Integrated Stratigraphy	6

Student option	1 optional course, chosen by the student during the first or second semester	6
----------------	--	---

#### **Other formative activities**

Supplementary educational activity	Eni Seminars	3
------------------------------------	--------------	---

## II year (2019-2020)

Type of activity	Course	CFU
------------------	--------	-----

### I semester (September – January)

Fundamental	Petroleum Geology – mod. 1 (Exploration and Petroleum System Modeling)	6
	Petroleum Geology – mod. 2 (Petrophysics and Reservoir Geology)	6
Fundamental	G.I.S. Geographical Information Systems	6
Fundamental, to choose between the two	Micropaleontology	6
	Hydrogeology	6
Student option	1 optional course, chosen by the student during the first or second semester	6

### Other formative activities:

Supplementary educational activity	Geological Field Activity	3
------------------------------------	---------------------------	---

### II semester (March – June)

Final assessment	Final Exam (Thesis)	27
------------------	---------------------	----

### The courses in English available as optional in the A.Y. 2018-2019 are:

optional courses held in english	Semester	CFU
Sedimentary Petrography	available in the first semester	6
Reservoir Geology	available in the first semester of the II year	6
GeoStatistics	available in the first semester	6

As reported in the University Regulations, student must apply his own study plan before 28<sup>th</sup> February 2019 using the Departmental form available at the link below, indicating the optional exams.

<http://www.fisgeo.unipg.it/fisgejo/index.php/it/didattica/corsi-di-laurea-in-geologia/msc-in-petroleum-geology/piani-di-studio.html>

However, in allowing students to attend optional exams during the first semester, it is recommended to complete the study plan immediately after enrolment procedure, at the beginning of the first semester.

### Teaching methods and Assessment

The course is entirely delivered in English, and therefore it is required a properly certified (see below) knowledge of English language corresponding to the European level B1 or equivalent.

The training activities will be performed with different modalities, such as frontal lectures, practical work in the classroom and in the laboratory, seminars, training courses, individual and assisted studies, field works.

The practical activities intend to develop the student's ability to solve efficiently problems, to work independently, and to develop skills in team-working and data sharing.

Exercises will allow the teacher to verify the learning level of each student.

To improve student's skills, seminars and meetings with experts in Hydrocarbon Geology will be organized each year. Moreover, in agreement with Eni E&P Division and Eni Corporate University, the Committee Coordination of Courses of Study (CCCS) organizes annual meetings with Eni delegates in order to address and plan for short-and long-term training offer.

Lecture attendance is strongly recommended for all courses; attendance at scheduled seminars and fieldworks is mandatory.

The credits are acquired after positive assessment of profit (exams). Evaluations have individual character, and may

consist of written and/or oral and/or exercise to be performed in laboratory or in the field. All activities allowing acquisition of credit must be assessed. The evaluation of the students is made by specific committees, consisting of at least two teachers. The mark is expressed in thirties. The composition of the specific committees and the calendar of exams are approved by the CCCS and published on the website at the beginning of each academic year.

## Pre-Requisites

Curricular pre-requisites are:

- Bachelor Degree, preferably in Geology, or in topics related with geoscience. A basic knowledge on geoscience is strictly required.
- Basic training in mathematics, physics and chemistry.
- English proficiency certificate for non-English mother tongue.

In order to allow the pre-evaluation process, students must submit the following documents **before mid-May 2019**:

- 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 Mrs. Marta Alunni Pini at:

Dipartimento di Fisica e Geologia,  
Via Pascoli  
06123 Perugia

or by email at:

[marta.alunnipini@unipg.it](mailto:marta.alunnipini@unipg.it).

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

## Transfers

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

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

If enrolled from study programs of the same class, CCCS will recognize every credit earned by the student in the previous curriculum. If enrolled from different class, CCCS will evaluate the congruity of the teaching program with that of this Master Course. Previously acquired knowledges and professional skills not corresponding to specific teaching courses will be checked by CCCS regarding their consistency with the objectives of the Master Course. In any case the recognized credits will never exceed the amount of 12 CFU.

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

The credits earned by students in the context of international study programs at Universities in force of bilateral agreements with the University of Perugia will be recognized with reference to the European Credit Transfer System (ECTS). Credits earned by students in other Italian Universities, European Union or in other countries not following 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.

## Final exam

The final exam aims to test the ability of the student to work independently and to expose and discuss the results of an original work (Thesis) on a specific topic. The thesis is carried out with the supervision of a teacher (Supervisor), belonging to the teaching staff of the University of Perugia Geological Courses eventually with one or more co-Supervisors. The co-Supervisor must be expert in the topic of the thesis and not necessarily an academic staff. The student makes his dissertation at the presence of a special committee appointed by the educational structure of reference.

The thesis can be written in Italian (with extended abstract in English) or in English (with extended abstract in Italian). The Committee is composed of 7 teachers, relating to the educational structure of reference and including the thesis Supervisor. For the evaluation and the final score the committee will take into account of the quality of the thesis and presentation and also of the whole student career timing and acquisition of credits.

At the final examination, up to ten points will be awarded, that will be added to the base score resulting from the weighted average of the exams obtained during the two years of the course. If the final score is equal to or greater than 110, the Committee, only if unanimously, may give honors (110 cum laude).

## 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 2018/19 will be the Profs. Massimiliano Porreca and Amalia Spina

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 student's problems in learning and suggesting 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 <a href="http://www.ielts.org">http://www.ielts.org</a>	Cambridge ESOL Examinations General English Exams <a href="http://www.cambridgeenglish.org/exams">http://www.cambridgeenglish.org/exams</a>	TOEFL Test of English as a Foreign Language <a href="http://www.ets.org/toefl">http://www.ets.org/toefl</a>		
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 stamped, 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.

DIRECTOR OF THE GEOLOGICAL COURSES  
*Prof. Simonetta Cirilli*