



**UNIVERSITY  
OF LONDON**

# Programme Specification 2018–2019

## Petroleum Geoscience

MSc  
PGDip  
Short courses

**Important document – please read**



## Table of Contents

Important information regarding the Programme Specification .....	2
Title and name of awards .....	3
Entrance requirements .....	5
Educational aims and learning outcomes of the programmes.....	7
Learning, teaching and assessment strategies .....	8
Assessment methods .....	8
Student support and guidance .....	9
Quality evaluation and enhancement.....	10
After graduation.....	11

## Important information regarding the Programme Specification

### About this document

Last revised 30 May 2018

The Programme Specification gives a broad outline of the structure and content of the programme, the entry level qualifications, as well as the learning outcomes students will achieve as they progress. Some of the information referred to in this programme specification is included in more detail on the University of London website. Where this is the case, links to the relevant webpage are included.

Where links to external organisations are provided, The University of London is not responsible for their content and does not recommend nor necessarily agree with opinions expressed and services provided at those sites.

If you have a query about any of the programme information provided, whether here or on the website, registered students should use the *ask a question* tab in the student portal <https://my.londoninternational.ac.uk>; otherwise the *Contact Us* button at the bottom left hand corner of every webpage should be used.

The relevant General Regulations and the Programme Regulations relating to your registration with us are for the current year and not in the year in which you initially registered.

On all matters where the regulations are to be interpreted, or are silent, our decision will be final.

### Terminology

The following language is specific to the Petroleum Geoscience programme:

**Module:** Individual units of the programme are called modules. Each module is a self-contained, formally-structured learning experience with a coherent and explicit set of learning outcomes and assessment criteria worth 20 credits, except for the research module which is worth 60 credits.

### Key revisions made

Programme specifications are revised annually. The quality committee of Royal Holloway, as part of its annual review of standards, confirms the programme structure and the educational aims and learning outcomes, and advises on any development in student support.

Where changes have been made which may impact on continuing students, these are listed below. For all new students, the programme and general information provided in this document is correct and accurate and will be applicable for the current year.

### Significant changes made to the programme specification 2018–2019:

The careers advice service is no longer available and references to this have now been removed.

## Title and name of awards

### Programme title

Petroleum Geoscience

### Award titles

Master of Science in Petroleum Geoscience (MSc)

Postgraduate Diploma in Petroleum Geoscience (PGDip)

### Exit awards

Postgraduate Diploma in Petroleum Geoscience (PGDip)

Postgraduate Certificate in Petroleum Geoscience (PGCert)

### Individual modules

There is also provision for individual modules of the programme to be taken on a stand-alone basis.

### Level of the programme

The Framework for Higher Education Qualifications in England, Wales and Northern Ireland (FHEQ) forms part of the UK Quality Code for Higher Education of the [Quality Assurance Agency for Higher Education](#) (QAA).

The awards are placed at the following Levels of the Framework for Higher Education Qualifications (FHEQ):

- |                                  |         |
|----------------------------------|---------|
| • MSc in Petroleum Geoscience    | Level 7 |
| • PGDip in Petroleum Geoscience  | Level 7 |
| • PGCert in Petroleum Geoscience | Level 7 |

All individual modules are at Level 7.

### QAA subject benchmarks group(s)

For further information about benchmarks see the [QAA website](#).

The QAA has not produced a benchmark statement for Geology at postgraduate level.

### Awarding body

University of London

### Registering body

[www.london.ac.uk](http://www.london.ac.uk)

University of London

### **Academic direction**

Royal Holloway, University of London

### **Accreditation by professional or statutory body**

Not applicable

### **Language of study and assessment**

English

### **Mode of study**

Study is by distance and flexible study. For the module Petroleum Systems PGM651, students have to take part in a residential workshop in the UK that includes 10–14 days of fieldwork and group project work.

### **Programme structures**

The MSc in Petroleum Geoscience consists of six mandatory 20 credit modules and an independent research project and report, worth 60 credits.

The Postgraduate Diploma in Petroleum Geoscience consists of six mandatory modules.

### **Individual modules**

All of the modules from the MSc, with the exception of the Project, may be taken on a stand-alone basis as Individual modules.

### **Exit awards**

Students cannot register for the Postgraduate Certificate because this is granted as an exit award only. Students who for academic or personal reasons are unable to complete the 180 credits required for the Masters award may exit with the completion of 60 or 120 credits and be awarded a Postgraduate Certificate or Postgraduate Diploma respectively. Exit awards are granted at the discretion of the Board of Examiners.

Full details of the Scheme of Award are included in the [Programme Regulations](#).

### **Maximum and minimum periods of registration**

The maximum and minimum periods of registration, from a student's effective date of registration, are:

	<b>Minimum</b>	<b>Maximum*</b>
<b>MSc degree</b>	Two years	Five years
<b>Postgraduate Diploma</b>	Two years	Five years
<b>Credit bearing individual modules</b>	One year	Two years

\*Extensions to the registration period may be granted on request.

Study materials are made available after registration and on payment of the applicable fee.

## Credit value of modules

Further information about the credit systems used by universities in the UK and Europe is available in:

The Higher Education Credit Framework for England,  
[www.qaa.ac.uk/en/Publications/Documents/Academic-Credit-Framework.pdf](http://www.qaa.ac.uk/en/Publications/Documents/Academic-Credit-Framework.pdf)

The Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies  
<http://www.qaa.ac.uk/en/Publications/Documents/qualifications-frameworks.pdf>

The European Credit Transfer and Accumulation System,  
[http://ec.europa.eu/education/tools/ects\\_en.htm](http://ec.europa.eu/education/tools/ects_en.htm)

Where credits are assigned to each module of a programme, credit indicates the amount of learning carried out in terms of the notional number of study hours needed, and the specified Framework for Higher Education Qualifications in England (FHEQ) credit level indicates the depth, complexity and intellectual demand of learning involved. The details below indicate the UK credits and the European Credit Transfer and Accumulation System (ECTS) values.

For the MSc in Petroleum Geoscience programme, credits are assigned as follows:

- Mandatory modules: 20 UK credits, 10 ECTS credits per module
- Independent research project and report (MSc only): 60 UK credits, 30 ECTS credits.

One UK credit equates to a notional ten hours of study.

## Recognition of prior learning

For this programme the University of London may recognise your prior learning and grant you credit towards the award. Details on [how to apply for recognition of prior learning](#) can be found on our website.

See the [General Regulations](#) (Section 3) and [Programme Regulations](#) for more rules relating to prior learning.

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## Entrance requirements

Applicants must submit an application in line with the procedures and deadlines set out on the [website](#).

Entrance requirements for a postgraduate award, or Individual modules, vary. Full details are provided on the programme page under the [Entry requirements](#) tab.

We consider qualifications from around the world. Details are available [here](#) and in the [Qualifications for Entrance](#) schedule.

## English language requirements

All applicants must satisfy the English language requirements for the programme. These are set out in detail on the [website](#).

Where an applicant does not meet the prescribed English language proficiency requirements but believes that they can demonstrate the requisite proficiency for admission the University may, at its discretion, consider the application.

### **Internet access and computer specification**

To study this programme students need a device with access to the internet to use the University of London website and the Student Portal. These are where the programme's study resources are located. Through the Student Portal students can register, enter exams and use the programme's Virtual Learning Environment (VLE). The VLE provides electronic learning materials, access to the University of London Online Library, networking opportunities, and other resources.

The minimum computing requirement is an internet-connected device with the following:

- A 7" screen or larger.
- An html5 compliant browser (e.g. recent versions of Chrome or Firefox but not Internet Explorer).
- A pdf reader.
- A word processor capable of generating pdf documents.

### **Independent research project report (MSc only)**

For the independent research project (necessary to complete the MSc), applicants must demonstrate that they have access to interpretation software, data and local expert supervision. The software and data are required to undertake the research project and a local mentor (e.g. a manager in their company) is required to help with day to day issues regarding that data and software. The mentor does not participate in the assessment but should be able to provide technical advice and support. Usually this means applicants should be currently in employment with an oil and gas company, but exceptions can be made for students who can arrange data, software and supervision by other means.

### **Fieldtrip requirements**

The module Petroleum Systems PGM651 includes fieldwork in the UK which takes place on 10–14 consecutive days usually in late April or early May.

Student must have suitable field equipment for the trip, including boots, warm clothes, and a waterproof jacket.

Students who require a visa to visit the UK should check visa requirements with their local British embassy and allow plenty of time if a visa application must be made. Royal Holloway can supply an invitation letter to registered students to support an application but cannot guarantee that a visa will be issued.

### **Students with access requirements**

The University of London welcomes applications from disabled students and/or those who have access requirements. The University will make every effort to provide reasonable adjustments to enable those with a disability, learning difficulty or access requirements to have the same opportunity as all other students to complete their studies. The University is committed to managing the application procedure and the programme itself to ensure that services are accessible for all students and that an inclusive environment is created.

Students with a disability, or others who may need access arrangements to assist in taking examinations should complete the relevant section of the application form, or contact the [Inclusive Practice Manager](#). A separate room or other arrangements may be considered.

Requests will be considered by a University panel, whose purpose is to ensure that students with disabilities and/or specific access requirements are neither advantaged nor disadvantaged by such arrangements when compared with other students. These considerations remain separate from the academic selection processes.

For further information, see [Inclusive Practice Policy](#).

### **Sources of funding and scholarships**

Information about potential sources of funding and scholarships is updated annually and where available is included in the prospectus web pages.

For further information see <https://london.ac.uk/applications/funding-your-study>

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## **Educational aims and learning outcomes of the programmes**

### **Learning outcomes of the programmes**

Teaching and learning in the programmes are closely informed by the active research of staff. The aims of the programme are:

- to provide systematic understanding and knowledge of the tectonic, structural and sedimentological controls that govern the distribution and occurrence of hydrocarbons in sedimentary basins
- to provide vocational training in the analytical tools and practical techniques that will enable students to understand hydrocarbon occurrences on all scales from basin wide petroleum systems to reservoir models of individual fields
- to encourage a critical understanding and awareness of current issues and developments in petroleum geoscience
- to foster students' intellectual development and independent learning ability required for continuing professional and personal development.

### **Learning outcomes: subject-specific knowledge and understanding**

Graduates from these programmes will be expected to have an extensive knowledge of:

- Tectonic process associated with the formation of sedimentary basins
- The geodynamic evolution of sedimentary basins
- The principles of seismic data processing
- The application of seismic attribute analysis to hydrocarbon reservoir characterisation
- Structural styles associated with sedimentary basins and hydrocarbon prospects, and the mechanisms by which such structures form
- The principles of stratigraphic analysis, with specific emphasis on sequence stratigraphy
- Clastic depositional environments and their application to hydrocarbon reservoirs
- Carbonate depositional environments and their application to hydrocarbon reservoirs
- The formation of source rocks and the formation, migration and trapping of hydrocarbons, including the formation of fault seals
- Fracture distribution in hydrocarbon reservoirs and its effects on fluid flow

- The appraisal, risking and economic analysis of hydrocarbon prospects including an understanding of recent and current developments in these fields and of the issues and controversies associated with such developments; a sound knowledge of the theories and methods used to enhance understanding of the issues; a critical approach to the gathering, analysis and interpretation of data relating to the development of new ideas and concepts in petroleum geoscience

### **Learning outcomes: intellectual and transferable skills**

Graduates from these programmes will be expected to be able to:

- Interpret seismic data and use that interpretation for structural, stratigraphic and sedimentological analysis, and for the appraisal of hydrocarbon prospects and accumulations.
- Interpret well log data and use that interpretation for stratigraphic and sedimentological analysis, and for the appraisal of hydrocarbon prospects and accumulations.
- Design and execute original research, using appropriate methods of data collection and analysis, develop and test hypotheses to explain the observations and to critically evaluate the outcomes.
- Report and communicate complex ideas arising from such work in a clear and concise manner.

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## **Learning, teaching and assessment strategies**

Teaching and learning draws on the methods and concepts used in the study of geosciences. It is also strongly informed by the current research interests in geosciences of the core teaching team at Royal Holloway. The main methods used to develop knowledge and understanding are through on-line materials which include slide presentations with voice-over, animations, video clips, practical exercises, quizzes and documents containing text and diagrams. These materials are supplemented by on-line forums associated with each module and a two-week field-based study session with module tutors. There is an independent research project and report at the end of the programme. Assessment is by practical coursework assignments, on-line tests, written examination papers and the independent research project and report. Full details of the assessments for individual modules are included in the programme handbook.

Assessment criteria for the programme take into account the level at which these skills have been achieved.

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## **Assessment methods**

For each module students will be assessed by written examination and coursework. Questions are structured to allow students to demonstrate that they have acquired appropriate knowledge and understanding. The way that students manage data, solve problems, evaluate ideas and the organisational skills they use to structure their written answers allows the standard of intellectual and transferable skills to be assessed.

Each mandatory module will be assessed by one two-hour unseen written examination and coursework comprising one or more individual assignments. The weighting ratio between the unseen written paper and the coursework for each mandatory module is 80:20. The written examinations take place on one occasion each year, normally in May/June. These are held at established centres worldwide. The Project will be assessed by the research project and report.

### **Individual modules**

A student may choose whether or not to be formally assessed in the credit bearing individual modules for which they are registered. Students who choose to be formally assessed will be examined in the same way as those undertaking a full award.

Full details of the dates of all examinations are available on the [website](#).

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## **Student support and guidance**

- The Programme Director at Royal Holloway is available for on-line consultation to advise students on academic, pastoral and welfare issues.
- Module coordinators, tutors and project advisors provide a back-up system of academic, pastoral and welfare advice.
- Project mentors are designated by the student from their workplace to provide advice and support on data and software for the Independent research project report (PGM051).
- Detailed Programme Handbook and module resources, provided on-line.
- A Departmental Staff / Student Committee for MSc students considers issues raised by students on the MSc or Postgraduate Diploma in Petroleum Geoscience offered through the University of London.
- Extensive supporting materials and learning resources via online access to University of London libraries and learning support.
- Access to support services via remote access to Royal Holloway facilities such as the Disability and Dyslexia Services (previously ESO) for students with additional learning needs to provide further advice where required.
- Virtual Learning Environment which provides access to materials for each module studied.
- Module subject guides for each module studied; these introduce and develop the topics.
- [Student Guide](#): This provides information which is common to all students and gives information about matters of importance from the start of a student's relationship with the University of London through to their graduation.
- [Programme Regulations](#).
- Employability skills module – guidance on how to manage your career in the future, available through the VLE.

- A University of London email account and web area for personal information management.
- [The Online Library](#): This provides a range of full-text, multidisciplinary databases where journal articles, book reviews and reports can be found.

There is further information on support and guidance in the [Programme handbook and Student guide](#).

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## Quality evaluation and enhancement

The University of London collaborates with the member institutions to deliver the University of London programmes. The policies, partnerships and systems are defined within the key documents: The Quality Framework, the [Quality Assurance Schedules](#), [Guidelines for Examinations](#), General Regulations and, for each programme, [Regulations](#).

### Parity of award standards

Every programme of study is developed and approved by a member institution of the University of London (or a consortium with representation by more than one institution) to the same standards and requirements as would be applied in the institution concerned. Proportionate and robust approval procedures, including external scrutiny and student engagement, are in place.

Learning materials are written and examinations are set and marked by academic staff who are required to apply the University's academic standards.

### Review and evaluation mechanisms

Procedures are in place to assure the standards of the award and the quality of the student experience, which include programme development, delivery, management, systematic monitoring and ongoing review and enhancement of all programmes. Improvements are made as necessary to ensure that systems remain effective and rigorous.

- Annual programme reports are produced for all programmes in order to review and enhance the provision and to plan ahead;
- Every year independent external examiners submit reports to confirm that a programme has been assessed properly and meets the appropriate academic standards;
- Annual student information statistics are produced and are referenced in all systematic reporting within the University of London;
- Periodic programme reviews are carried out every 4-6 years to review how a programme has developed over time and to make sure that it remains current and up-to-date.

## Student feedback mechanisms

The Student Experience Survey, carried out every two years, collects feedback from the University of London student body on a range of topics relating to the student lifecycle. The results are considered in a number of different ways, including by the Pro-Vice Chancellor, the programme team, principal committees and departments at the University of London responsible for the different aspects of the student experience. Once the findings have been considered in detail, responses are published from both the University of London and from the individual Programme Directors.

Additional survey activity may also be conducted from time to time through the student portal, by email or from the programme team. VLEs also provide the opportunity for informal feedback and discussion.

An undergraduate and postgraduate student member is appointed by the University to the majority of committees through an annual appointment round. Some programmes also recruit student members at the programme level. Students are frequently invited to take part in quality review processes such as Periodic Programme Reviews, Programme approval, Thematic Reviews, MOOC review panels and ad hoc focus groups. Opportunities such as these are advertised through social media and on the website. More information can be found at <https://london.ac.uk/current-students/getting-involved>.

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## After graduation

### Further study

Successful completion of the programme can allow students to progress to a higher level award in the subject area.

### Graduate employment routes

Graduates of the programme have a very successful record of gaining employment in the oil and gas exploration and production industry in roles ranging from exploration geologists to reservoir engineers and processing geophysicists.

### The Alumni Network

Upon graduation, students automatically become members of the University of London Alumni Network, a diverse community of over 100,000 alumni in more than 180 countries. The Alumni Network can provide past students with lifelong links to the University of London and each other. Benefits include social and networking events, access to local groups, a bi-annual magazine, social networking groups, and the opportunity to become an Alumni Ambassador for the University of London.

For further information, please see <https://london.ac.uk/alumni>, [www.facebook.com/londonualumni](https://www.facebook.com/londonualumni), [www.instagram.com/londonu](https://www.instagram.com/londonu) and <https://www.linkedin.com/school/university-of-london/>