Programme Regulations
2019–2020

Petroleum Geoscience

MSc
PGDip
Individual modules

Important document – please read
This document contains important information that governs your registration, assessment and programme of study
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Important information regarding the Programme Regulations

About this document

Last revised 9 May 2019

As a student registered with the University of London you are governed by the current General Regulations and Programme Regulations associated with your programme of study.

These Programme Regulations are designed and developed by Royal Holloway which is responsible for the academic direction of the programme. The regulations take account of any associated arrangements at Royal Holloway. Programme Regulations, together with the Programme handbook, will provide the detailed rules and guidance for your programme of study. Further information about how to use the Programme Regulations and Programme Handbook can be found in the Student Guide.

In addition to Programme Regulations you will have to abide by the General Regulations. These regulations apply to all students registered for a programme of study with the University of London and provide the rules governing registration and assessment on all programmes; they also indicate what you may expect on completion of your programme of study and how you may pursue a complaint, should that be necessary. Programme Regulations should be read in conjunction with the General Regulations.

The relevant General Regulations and the Programme Regulations relating to your registration with us are for the current year and not 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.

Further information about your programme of study is outlined in the Programme Specification which is available on the relevant Courses page of the website. The Programme Specification gives a broad overview of the structure and content of the programme as well as the learning outcomes students will achieve as they progress.

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.

**Project advisor**: A person who is part of the assessment team at Royal Holloway designated by Royal Holloway to advise on the Independent research project [PGM051].

**Project mentor**: A person designated by a student at a student’s workplace (e.g. a manager) who can help with day to day issues regarding data and software needed to complete the Independent research project [PGM051]. The mentor does not participate in the assessment but should be able to provide advice and support.

Throughout the Regulations, ‘we’ ‘us’ and ‘our’ mean the University of London; ‘you’ and ‘your’ mean the student, or where applicable, all students.

If you have a query about any of the programme information provided please contact us. You should use the ask a question tab in the Student Portal.
Changes to Petroleum Geoscience Programme Regulations 2019–2020

Programme Regulations are revised annually. The following changes have been made to the 2019–2020 edition.

Exit and intermediate awards are now known as exit and intermediate qualifications.

There is no longer a requirement to pass all modules on the first attempt in order to be awarded a merit or distinction (see Section 8).
1 Structure of the programmes

Award

1.1 The following named awards are offered under the Petroleum Geoscience programme:

- MSc in Petroleum Geoscience
- Postgraduate Diploma in Petroleum Geoscience

Award structure

1.2 The MSc in Petroleum Geoscience consists of six mandatory modules each worth 20 credits and a 60 credit Independent research project report. The credits indicate the proportional weighting towards the MSc classification grade.

1.3 The Postgraduate Diploma in Petroleum Geoscience consists of six mandatory modules, each worth 20 credits.

1.4 The Postgraduate Certificate in Petroleum Geoscience is an exit qualification that requires the passing of at least three mandatory modules to the value of 60 credits.

1.5 Fieldwork is part of the Petroleum systems [PGM651] module and involves 10–14 days of fieldwork incorporating group work and academic lectures.

1.6 You can apply to change modules at any time. However, if you have entered the examination we will not consider your application to change modules until the results for that session are published.

Individual modules

1.7 You can apply to register for one or more modules on a stand-alone basis as an individual module, either instead of or in addition to, registering for the Postgraduate Diploma or MSc degree.

1.8 The following credit-bearing modules are offered as individual modules:

- Tectonics and lithosphere dynamics [PGM151]
- Geophysical analysis [PGM251]
- Structural analysis [PGM351]
- Sedimentology and stratigraphy [PGM451].
1.9
You may take up to three individual modules without being registered for the MSc degree or Postgraduate Diploma in Petroleum Geoscience.

1.10
We may decide that you must pass one of Tectonics and lithosphere dynamics [PGM151], Geophysical analysis [PGM251], Structural analysis [PGM351] or Sedimentology and stratigraphy [PGM451] as an individual module before we will consider allowing you to register for the Postgraduate Diploma or MSc in Petroleum Geoscience.

2 Registration

Effective date of registration

2.1
Your effective date of registration will be 1 September in the year that you initially registered. This allows you to sit your first examinations in the following May/June.

Period of registration

2.2
The minimum and maximum periods of registration to complete the programme are counted from your effective date of registration.

2.3
The minimum period of registration to complete the Postgraduate Diploma or MSc in Petroleum Geoscience is two years. The maximum period of registration allowed to complete the Postgraduate Diploma or MSc in Petroleum Geoscience is five years.

2.5
The minimum period of registration to complete an individual module is one year. The maximum period of registration allowed to complete an individual module is two years.

2.6
If you transfer from the Postgraduate Diploma to the MSc in Petroleum Geoscience, the maximum registration period for the MSc will be counted from the effective date of registration for the Postgraduate Diploma.

2.7
If you start by taking individual modules and then register for the Postgraduate Diploma or MSc in Petroleum Geoscience we will give you a new maximum period of registration for the Postgraduate Diploma or MSc.
3 Recognition of prior learning and credit transfer

To be read in conjunction with the General Regulations, Section 3.

Recognition of prior learning

3.1
Where prior learning is recognised, the decision to award credit (known as Accreditation of prior learning (APL)) shall be made by an academic appointed by the Programme Director.

3.2
Prior learning may only be considered and credit awarded towards the MSc or Postgraduate Diploma, and not the Postgraduate Certificate.

Credit transfer

3.3
If you are a student or graduate of the University of London we will consider an application to transfer credit to the Petroleum Geoscience programme on a discretionary basis.

4 Module selection

Appendix A provides details of the programme structures and module titles.

All students

4.1
In any one year you may attempt examinations in a maximum of four mandatory modules (80 credits), excluding resits. There is no requirement to enter an examination every year.

4.2
In these regulations ‘attempted’ means you must have submitted coursework and sat an examination, and ‘completed’ means you must have a mark of at least 40.00% (i.e. a condonable mark).

Reservoir geoscience [PGM551] and Petroleum systems [PGM651]

4.3
Before you can register for Reservoir geoscience [PGM551] you must have attempted Geophysical analysis [PGM251].

4.4
Before you can register for Petroleum systems [PGM651] you must have attempted Tectonics and lithosphere dynamics [PGM151], Geophysical analysis [PGM251], Structural analysis [PGM351] and Sedimentology and stratigraphy [PGM451] and must be registered for or have completed Reservoir geoscience [PGM551].

4.5
You can attempt Reservoir geoscience [PGM551] and Petroleum systems [PGM651] either before or at the same time as the Independent research project report [PGM051].
Independent research project report (PGM051)

4.6
Before you can register for the Independent research project [PGM051] you must have completed Tectonics and lithosphere dynamics [PGM151], Geophysical analysis [PGM251], Structural analysis [PGM351] and Sedimentology and stratigraphy [PGM451], and registered for or completed Reservoir geoscience [PGM551] and Petroleum systems (including fieldwork) [PGM651]. You must not have more than two module marks below 40.00%.

5 Assessment for the programme

Assessment methods

5.1
Each 20 credit module of the Petroleum Geoscience programme will be assessed by one two-hour unseen written examination and one or more pieces of coursework. The weighting ratio between the unseen written examination and the coursework for each module is 80:20.

5.2
You must submit the coursework for each module before you sit the examination for the module and in the same academic year. If you do not submit the coursework for a module, or if we receive it after the due date, you may still attempt the written examination for the module. However, the coursework will not receive a mark and you will therefore lose 20.00% of the total mark available for that module.

5.3
To contact the Student Assessment Office please use the Student Portal.

If you submit the coursework and then cannot sit the examination you must notify the Student Assessment Office as soon as possible. You will be expected to attempt the examination at the next available opportunity. The mark for the coursework will carry over.

5.4
We will not allow you to make a second attempt at the coursework before you have sat the examination. If you receive a mark of ‘Fail’ for the coursework, but pass the overall assessment for the module, you cannot resubmit coursework for the module.

See the website for the list of examination centres.

Independent research project report [PGM051] – MSc degree only

The word count and other rules, requirements and guidelines for completing the Independent research project report [PGM051] are given on the VLE.

See Section 4, Module selection, for the prerequisites to taking Independent research project report [PGM051].

5.5
The Independent research project report [PGM051] (MSc degree only) will be assessed by a project report proposal and a project report.
5.6
You must register for the Independent research project report [PGM051] by 1 November in the year before submitting the report on 1 May.

5.7
You must submit a project report proposal for the Programme Director to approve no later than 1 November in the year before submitting the report on 1 May.

5.8
You may submit your project report proposal for the Independent research project report [PGM051] after you have completed the first four mandatory modules: Tectonics and lithosphere dynamics [PGM151]; Geophysical analysis [PGM251]; Structural analysis [PGM351] and Sedimentology and stratigraphy [PGM451].

5.9
The Programme Director will appoint a project advisor for your Independent research project report [PGM051]. You must give your project advisor a monthly progress report.

5.10
The project must not arrive later than 1 May in the year of submission. A project received after the deadline will not be considered until the following year.

5.11
If you have submitted a project proposal that has been approved and you are then unable to submit the final project report in the same academic year you can request a deferred submission date to the following year providing this time period is within your maximum registration period. In this event you must write to the Programme Director with supporting evidence explaining why you are not submitting the project report. The Board of Examiners will decide if allowing you to submit the project report in the following year will count as your first attempt at the project report.

Date of examinations

5.12
Written examinations take place in May/June each year.

See the General Regulations for rules on taking written examinations

6 Number of attempts permitted at an examination

6.1
We will allow you a maximum of two attempts at an examination or coursework. Absence from a written examination will not count as one of the two attempts.

6.2
If a second attempt is made at an examination or coursework and there are no mitigating circumstances that we accept, the overall mark given for the module will be capped at 50.00%. This capping applies to the overall mark for the module and not to the individual marks given for the written examination and the coursework.
The written examination and the coursework

6.3
You will pass a mandatory module if the combined weighted mark for the coursework and the written examination is 50.00% or above.

6.4
A student who is awarded marks for the coursework and written examination that together result in a mark of:

- 50.00% or above (Pass) may make no further attempt at the assessments for the module, even if one of the elements is given the mark of fail;
- 40.00–49.99% (Condonable Fail) may choose to progress with the existing condonable mark or to make a second attempt at the element(s) of the assessment that was failed. Only elements of the assessment that were failed may be re-attempted. A maximum of 40 credits can be condoned in this way.
- 0–39.99% (Fail) must make a second attempt at the assessment for the module. Only elements of the assessment that were failed may be re-attempted.

Independent research project [PGM051] (MSc degree only)

6.5
If you receive the result of ‘Fail’ for the project report, with a mark of 40.00–49.99%, we will allow you to resubmit the project report with minor adjustments by the date specified in our response. The resubmitted project report will still count as the first attempt in this case.

6.6
If you receive the result of ‘Fail’ for the project report with a mark of less than 40.00%, we will permit you to resubmit a new project report by the date specified in our response. The resubmitted project report will count as the second attempt in this case.

7 Progression within the programme

See also Section 4 for module prerequisites and other rules for module selection.

Transfer from Postgraduate Diploma to the MSc in Petroleum Geoscience

7.1
If we allow you to progress from the Postgraduate Diploma to the MSc you will be credited with mandatory modules that you have passed.

7.2
If you are registered for the Postgraduate Diploma and have passed a minimum of four modules to the value of 80 credits, (subject to the rules of condonement outlined in Section 6.5), you may ask the Programme Director for permission to progress to the MSc and to be credited with the mandatory modules that you have passed. In this event, you must notify the Programme Director by 1 August in the year that you wish to transfer and confirm that you have access to the data, software and a project mentor required to undertake a project.
7.3
If you are registered for the Postgraduate Diploma and have passed all the modules prescribed to the value of 120 credits (subject to the rules of condonement in Section 6.5), at the required level, the Board of Examiners will consider whether to recommend that you progress to the MSc and attempt the Independent research project [PGM051]. If you satisfy the Board of Examiners in this way, and wish to progress, you must do so in the same year that you qualified for the Postgraduate Diploma.

Transfer from the MSc to the Postgraduate Diploma in Petroleum Geoscience

7.4
You may transfer from the MSc to the Postgraduate Diploma. You will be awarded credit for modules already passed if you choose to do this.

If you have accepted an award

7.5
If you have already been awarded the Postgraduate Diploma in Petroleum Geoscience and you wish to complete the MSc in Petroleum Geoscience, we will consider your application subject to the following conditions:

- The award was not made as a result of your failure to progress or complete your studies.
- No more than three years have passed between the award of the Postgraduate Diploma in Petroleum Geoscience and your registration for the MSc in Petroleum Geoscience
- You have sufficient time remaining on your registration period to complete the MSc.
- The Postgraduate Diploma in Petroleum Geoscience is surrendered prior to the award of the MSc in Petroleum Geoscience being made.

The maximum period of registration allowed to complete the Postgraduate Diploma and MSc is five years, counted from your effective date of registration (see Section 2).

If you have accepted an exit qualification

7.6
If you have accepted the award of the Postgraduate Certificate in Petroleum Geoscience as an exit qualification we will not allow you to transfer your registration to the Postgraduate Diploma in Petroleum Geoscience or the MSc in Petroleum Geoscience.

7.7
If you have accepted the award of the Postgraduate Diploma in Petroleum Geoscience as an exit qualification we will not allow you to transfer your registration to the MSc in Petroleum Geoscience.

Transfer from Individual modules

7.8
If you pass one or two of the individual modules and wish to progress you can apply to register for the Postgraduate Diploma or MSc in Petroleum Geoscience. If your application is successful we will give you credit for the individual modules that you have completed provided that an application is made within three years of the completion of the relevant module or modules.
8 Schemes of award

8.1
The MSc and the Postgraduate Diploma examination scripts are marked according to the following scale:

<table>
<thead>
<tr>
<th>Mark Range (%)</th>
<th>Class Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>70+</td>
<td>Distinction</td>
</tr>
<tr>
<td>60-69</td>
<td>Merit</td>
</tr>
<tr>
<td>50-59</td>
<td>Pass</td>
</tr>
</tbody>
</table>

MSc Petroleum Geoscience

8.2
The MSc in Petroleum Geoscience consists of six mandatory modules and an independent research project report:

- Tectonics and lithosphere dynamics [PGM151]
- Geophysical analysis [PGM251]
- Structural analysis [PGM351]
- Sedimentology and stratigraphy [PGM451]
- Reservoir geoscience [PGM551]
- Petroleum systems [PGM651]*
- Independent research project report (MSc degree only) [PGM051].

*Petroleum systems [PGM651] includes 10–14 days of fieldwork incorporating group work and academic lectures.

8.3
Each mandatory module is worth 20 credits and the independent research project is worth 60 credits. The credits indicate proportional weighting towards the MSc classification grade.

8.4
To be awarded the MSc degree in Petroleum Geoscience, you must achieve an overall weighted average of at least 50.00%. Marks between 40.00–49.99% can be condoned in taught courses constituting up to a maximum of 40 credits provided that the overall weighted average is at least 50.00%.

8.5
A mark below 50.00% in the research project cannot be condoned.

8.6
We may award you the MSc degree with Merit if you achieve an overall weighted average of 60.00% or above.
8.7
We may award you the MSc degree with Distinction if you achieve an overall weighted average of 70.00% or above.

8.8
The Board of Examiners will decide if a student registered for the MSc degree in Petroleum Geoscience who has satisfied the examiners in the six mandatory modules but who does not pass the Independent research project report [PGM051] may be awarded the Postgraduate Diploma in Petroleum Geoscience.

Postgraduate Diploma in Petroleum Geoscience

8.9
The Postgraduate Diploma in Petroleum Geoscience consists of six mandatory modules:

- Tectonics and lithosphere dynamics [PGM151]
- Geophysical analysis [PGM251]
- Structural analysis [PGM351]
- Sedimentology and stratigraphy [PGM451]
- Reservoir geoscience [PGM551]
- Petroleum systems [PGM651]*.

*Petroleum systems [PGM651] includes 10–14 days of fieldwork incorporating group work and academic lectures.

8.10
Each module is worth 20 credits and weighted equally for the overall assessment of the award.

8.11
To be awarded the Postgraduate Diploma in Petroleum Geoscience you must achieve an overall weighted average of at least 50.00%.

We do not usually condone marks in the region 40.00–49.99% for the award of a Postgraduate Diploma, but if we do, condoned fails would be in modules which do not constitute more than 40 credits of the final assessment.

8.12
We may award you the Postgraduate Diploma with Merit if you achieve an overall weighted average of 60.00% or above.

8.13
We may award you the Postgraduate Diploma with Distinction if you achieve an overall weighted average of 70.00% or above.
8.14

If you registered for the MSc we may decide to award you the Postgraduate Diploma in Petroleum Geoscience as an exit qualification if you do not complete the requirements of the MSc, but do satisfy the Board of Examiners, at the level required, in all the subjects that comprise the Postgraduate Diploma. In this event, the date of award for the Postgraduate Diploma will be the year in which you satisfied the requirements for that award.

Postgraduate Certificate in Petroleum Geoscience

8.15

We may award the Postgraduate Certificate in Petroleum Geoscience as an exit qualification if you do not complete the requirements of the Postgraduate Diploma or MSc, but do pass at least three modules (60 credits). APL will not count towards the Postgraduate Certificate in Petroleum Geoscience.

8.16

The Board of Examiners will decide if a student can be awarded the Postgraduate Certificate in Petroleum Geoscience. The Board of Examiners must be satisfied that the award represents a coherent programme of study.

8.17

The Postgraduate Certificate in Petroleum Geoscience is classified on a Pass/Fail basis.

8.18

All assessments are marked and graded according to the assessment criteria for the degree in Petroleum Geoscience.

Individual modules

8.19

All assessments are marked and graded according to the assessment criteria for the degree in Petroleum Geoscience.
Appendix A – Structure of the programmes

Postgraduate Diploma in Petroleum Geoscience

Six mandatory modules:
You may register for the first four modules in any order:

1. Tectonics and lithosphere dynamics [PGM151]
2. Geophysical analysis [PGM251]
3. Structural analysis [PGM351]
4. Sedimentology and stratigraphy [PGM451]
5. Reservoir geoscience [PGM551]*
6. Petroleum systems (including fieldwork) [PGM651]**

Note
* To register for Reservoir geoscience [PGM551], you must have attempted Geophysical analysis [PGM251].
** To register for Petroleum systems [PGM651] you must have attempted Tectonics and lithosphere dynamics [PGM151], Geophysical analysis [PGM251], Structural analysis [PGM351] and Sedimentology and stratigraphy [PGM451] and must be registered for or have completed Reservoir geoscience [PGM551].

Attempted means: must have submitted coursework and sat an exam.
Completed means: must have a mark of at least 40.00% (i.e. a condonable mark).

MSc in Petroleum Geoscience

Six mandatory modules and an independent research project:
You may register for the first four modules in any order:

1. Tectonics and lithosphere dynamics [PGM151]
2. Geophysical analysis [PGM251]
3. Structural analysis [PGM351]
4. Sedimentology and stratigraphy [PGM451]
5. Reservoir geoscience [PGM551]*
6. Petroleum systems (including fieldwork) [PGM651]**
7. Independent research project element [PGM051]**

Note
* To register for Reservoir geoscience [PGM551], you must have attempted Geophysical analysis [PGM251].
** To register for Petroleum systems [PGM651] you must have attempted Tectonics and lithosphere dynamics [PGM151], Geophysical analysis [PGM251], Structural analysis [PGM351] and Sedimentology and stratigraphy [PGM451] and must be registered for or have completed Reservoir geoscience [PGM551].

*** To register for Independent research project report [PGM051] you must have completed Tectonics and lithosphere dynamics [PGM151], Geophysical analysis [PGM251], Structural analysis [PGM351] and Sedimentology and stratigraphy [PGM451] and must be registered for or have completed Reservoir geoscience [PGM551] and Petroleum systems [PGM651]. You must not have more than two course marks below 40.00%.

Attempted means: must have submitted coursework and sat an exam.

Completed means: must have a mark of at least 40.00% (i.e. a condonable mark).
Appendix B – Module descriptions

Note
Any examination aids permitted will be supplied by the University.

Tectonics and lithosphere dynamics [PGM151]
The module introduces students to plate tectonic theory and our understanding of plate tectonic processes. It covers theory, how plate-motions give rise to basins and techniques for investigating plate tectonics and basins.
Assessment: one two-hour unseen written paper (80.00%) and one or more individual coursework exercises (20.00%).

Geophysical analysis [PGM251]
The module covers the principles of seismic wave theory, the various steps involved in the processing of seismic data and the limitations of the technique in terms of imaging the subsurface. The module is also an introduction to seismic interpretation.
Assessment: one two-hour unseen written paper (80.00%) and one or more individual coursework exercises (20.00%).

Structural analysis [PGM351]
This module covers rock mechanics, structural styles and structural analysis. The module covers extensional, inverted, strike-slip and thrust systems.
Assessment: one two-hour unseen written paper (80.00%) and one or more individual coursework exercises (20.00%).

Sedimentology and stratigraphy [PGM451]
The module covers clastic sedimentary systems and carbonate sedimentary systems in terms of processes and settings. The module also introduces the principles of stratigraphy and develops a thorough understanding of sequence stratigraphic concepts.
Assessment: one two-hour unseen written paper (80.00%) and one or more individual coursework exercises (20.00%)

Reservoir geoscience [PGM551]
This module is concerned with detailed analysis of structures, sediments and fractures at reservoir scales. It covers well-log analysis, fluid-flow, reservoir geophysics and reservoir modelling to explain how these methodologies are used to assess reservoir potential.
Assessment: one two-hour unseen written paper (80.00%) and one or more individual coursework exercises (20.00%).
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(MSc/PGDip/Individual modules)

Petroleum systems [PGM651]
The module introduces the concept of petroleum systems and places particular emphasis on understanding source rocks and hydrocarbon generation in the context of basin evolution. The module then moves to the analysis of individual prospects, looking at seals, trap formation, play analysis, prospect risking and economic analysis. The module concludes with a field-based residential module that provides students (working in teams) with the opportunity to apply these concepts to field examples and to case studies based on industry data.

Assessment: one two-hour unseen written paper (80.00%) and one or more individual coursework exercises (20.00%).

Independent research project report (MSc degree only) [PGM051]
The module is research-based, but involves individual reviews of project proposals with a student’s project advisor, regular review consultations with the project advisor and progress reports to the project advisor. Students are required to produce a report.

Students who wish to take this module should submit a project report proposal to the Programme Director. Students are required to provide their project advisor with a monthly report on their project progress.

Assessment: one project report (100.00%).
Appendix C – Assessment criteria

Assessment criteria for coursework, written examinations and projects.

### Coursework Assessment Criteria

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outstanding</strong> (80–100)</td>
<td>Deep understanding of the subject area; significant originality of ideas; high levels of ability in appropriate analytical techniques; critical commentary on methodology; thorough and clear evidence of intensive, critical, independent reading; extensive referencing and professional bibliography; fluent, accessible style; professional standard of presentation with no or very minor errors of spelling, punctuation or grammar.</td>
</tr>
<tr>
<td><strong>Distinction</strong> (70–79)</td>
<td>Very good understanding of the subject area; originality of ideas; clear ability in appropriate analytical techniques; some critical commentary on methodology; some evidence of intensive, critical analysis of data; critical independent reading; extensive referencing and professional bibliography; fluent, accessible style; near-professional standard of presentation with few errors of spelling, punctuation or grammar.</td>
</tr>
<tr>
<td><strong>Good Pass</strong> (60–69)</td>
<td>Clear understanding of the subject area; some originality of ideas; appropriate use of analytical techniques; appreciation of methodology; critical analysis of data; evidence of independent reading; adequate referencing and professional bibliography; adequate structure and style; reasonably professional standard of presentation with some errors of spelling, punctuation or grammar.</td>
</tr>
<tr>
<td><strong>Low Pass</strong> (50–59)</td>
<td>General understanding of the subject area; limited originality of ideas; straightforward application of analytical techniques; limited commentary on methodology; limited critical analysis of data; limited evidence of independent reading; adequate referencing and adequate bibliography; adequate structure and style; moderately professional standard of presentation with errors of spelling, punctuation or grammar.</td>
</tr>
<tr>
<td><strong>Fail</strong> (40–49)</td>
<td>Limited understanding of the subject area; lacking originality of ideas; limited application of analytical techniques; lacking commentary on methodology; limited critical analysis of data, little evidence of independent reading; adequate referencing and adequate bibliography; adequate structure and style; poor to moderate standard of presentation with errors of spelling, punctuation or grammar.</td>
</tr>
<tr>
<td><strong>Poor Fail</strong> (20–39)</td>
<td>Little understanding of the subject area; few original ideas; limited application of analytical techniques; limited understanding of methodology; lacks commentary on methodology; no critical analysis of data, very little or no evidence of independent reading; very poor referencing and poor bibliography; poor structure and style; poor standard of presentation with significant errors of spelling, punctuation or grammar.</td>
</tr>
<tr>
<td><strong>Clear Fail</strong> (0–19)</td>
<td>Lack of understanding of the subject area; no original ideas; inappropriate application of analytical techniques; poor understanding of methodology; no commentary on methodology; no critical analysis of data, no evidence of independent reading; very poor referencing and poor bibliography; poor</td>
</tr>
</tbody>
</table>
structure and style; poor standard of presentation with significant errors of spelling, punctuation or grammar.

**Written Examination Assessment Criteria**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outstanding</strong> (80–100)</td>
<td>Deep understanding; near-comprehensive knowledge; high levels of ability in analysis; coherent structure and direct focus on question; answer complete for the time available; intensive critical, independent reading beyond reading lists; extensive referencing; fluent style; no or very minor errors of spelling, punctuation or grammar.</td>
</tr>
<tr>
<td><strong>Distinction</strong> (70–79)</td>
<td>Very good understanding; near-comprehensive knowledge; good level of ability in analysis; coherent structure; focus on question; answer reasonably complete for the time available; critical, independent reading; adequate referencing; fluent style; few, minor errors of spelling, punctuation or grammar.</td>
</tr>
<tr>
<td><strong>Good Pass</strong> (60–69)</td>
<td>Clear understanding; wide-ranging knowledge; effective analysis; coherent structure; focus on question; answer adequate for the time available; evidence of directed reading; may have some referencing; adequate style; few errors of spelling, punctuation and grammar.</td>
</tr>
<tr>
<td><strong>Low Pass</strong>  (50–59)</td>
<td>General understanding and knowledge; some errors in analysis; adequate structure; may not focus on question; answer nearly adequate for the time available; little evidence of reading; little or no referencing; simple style; some errors of spelling, punctuation or grammar.</td>
</tr>
<tr>
<td><strong>Fail</strong> (40–49)</td>
<td>Limited general understanding and knowledge; numerous errors in analysis; sketchy structure; poor focus on question; answer deficient for the time available; no evidence of reading; no referencing; simple style; significant errors of spelling, punctuation or grammar.</td>
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<tr>
<td><strong>Poor Fail</strong>  (20–39)</td>
<td>Inadequate understanding and knowledge; numerous errors in analysis; poor structure; poor focus on question or has misinterpreted question; answer deficient for the time available; no evidence of reading; no referencing; poor style; significant errors of spelling, punctuation or grammar.</td>
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<tr>
<td><strong>Clear Fail</strong> (0–19)</td>
<td>Little or no understanding or knowledge; evidence of confusion in analysis; chaotic or fragmentary structure; lack of focus on question; no evidence of reading; no referencing; inadequate style; numerous errors of spelling, punctuation or grammar.</td>
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</table>
## Project assessment criteria

<table>
<thead>
<tr>
<th></th>
<th>Project Aims</th>
<th>Understanding of background and context</th>
<th>Data handling and generation</th>
<th>Interpretation of results</th>
<th>Discussion and conclusions</th>
<th>Presentation</th>
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</thead>
<tbody>
<tr>
<td>Outstanding</td>
<td>Clearly expressed, well understood and at the forefront of the science</td>
<td>Clear and incisive critical analysis of background and context, clear appreciation of current issues and debate</td>
<td>Complete, rigorous approach, full understanding of limitations and uncertainties</td>
<td>Highly innovative interpretations, fully substantiated and critically appraised, appreciation of the subtleties of the data</td>
<td>Complete awareness of wider significance and application of results. Immediately publishable work</td>
<td>Clear and eloquently written, hardly any errors, all diagrams clear and appropriate. Thorough reference list</td>
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<td>(80–100)</td>
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<tr>
<td>Distinction</td>
<td>Clearly expressed, well understood and challenging</td>
<td>Clear critical analysis of the background and appreciation of current issues and debate</td>
<td>Rigorous approach, good understanding of limitations and uncertainties</td>
<td>Original insights derived from observations, good level of critical appraisal</td>
<td>Advanced awareness of wider significance and application of results. Publishable work</td>
<td>Clear and well written, well organised, few errors, clear and appropriate diagrams. Well referenced</td>
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<td>(70–79)</td>
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<tr>
<td>Good Pass</td>
<td>Clearly expressed and well understood</td>
<td>Good understanding and critical analysis</td>
<td>Good realistic approach, aware of most limitations and uncertainties</td>
<td>Realistic understanding of observations, justified by data available</td>
<td>Some good understanding of wider implications. Potentially publishable with some additional work</td>
<td>Good level of presentation, few errors, most diagrams clear and appropriate. Well referenced</td>
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<td>(60–69)</td>
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<td>Low Pass</td>
<td>Clear, but of limited scope or not fully understood</td>
<td>Satisfactory understanding, but at face value and with limited critical analysis</td>
<td>Satisfactory, but limited appreciation of uncertainties and limitations</td>
<td>Sound but basic understanding of observations, largely justified by available data</td>
<td>Basic understanding of wider implications, but could be developed further</td>
<td>Satisfactory presentation, some errors but most diagrams clear and appropriate. Reasonable references</td>
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<td>(50–59)</td>
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<td>Fail (30–49)</td>
<td>Lacking in clarity</td>
<td>Incomplete and some misconceptions</td>
<td>Lacking in rigor, little regard for uncertainties and limitations</td>
<td>Limited understanding of observations with misconceptions and/or not fully justified</td>
<td>Limited understanding or misconception of wider implications</td>
<td>Numerous errors, unclear or inappropriate diagrams, limited references. Poorly organised</td>
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<tr>
<td>Clear Fail (0–29)</td>
<td>None, or very confused</td>
<td>None, or very limited</td>
<td>Sloppy and inaccurate</td>
<td>Failure to draw many significant observations from the data</td>
<td>No attempt to consider the wider significance of the results or their implications</td>
<td>Very difficult to read, poor or unclear diagrams, lacking properly cited references. Disorganised</td>
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</tbody>
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