Programme Specification

1 Awarding body University of London
2 Teaching Institution Birkbeck College
3 Programme Title(s) Cert HE Planetary Science with Astronomy
4 Programme Code(s) UCHPSAST_C
5 UCAS code (if applicable) N/A
6 Home Department Earth and Planetary Sciences
7 Exit Award(s) N/A
8 Duration of Study (number of years) 2
9 Mode of Study FT PT X DL X
10 Level of Award (FHEQ) 4

11 Other teaching depts or institution (or not applicable) N/A
12 Professional, Statutory Regulatory Body(PSRB) details (or not applicable) N/A
13 QAA Benchmark Statement (or not applicable) N/A

14 Programme Rationale & Aims

Main Aims
This programme will introduce students to the wide range of geological processes that have shaped planetary bodies within the Solar System, and provide a grounding in the wider astronomical context.

Students will receive a basic training in Earth sciences, coupled with a strong emphasis on using the results of recent planetary exploration to understand the nature of other terrestrial bodies within the Inner Solar System (Mercury, Venus, Mars, Moon) and the rocky/icy satellites of the giant planets. In addition, the course will include introductory modules in astronomy and astrobiology (i.e. the search for life in the universe).

The programme will help students develop their intellectual abilities and confidence in critical reasoning and in their ability to synthesize information from a variety of sources. Given the interdisciplinary nature of planetary science, the programme will also help students relate specific knowledge to a broader context.

Distinctive Features
The programme will involve part-time, evening, face-to-face study, provision of lecture notes and videos of lectures on-line, and practical sessions.

15 Entry Criteria

No formal entry requirement for mature students. Knowledge of chemistry, physics and mathematics at GCSE level would be useful. An A-level in any science would be an advantage. However, the main entry criterion is a demonstration of an interest in planetary geology and astronomy.
### Learning Outcomes

This programme is intended to capitalize on the very great public interest in planetary science and space exploration. This inherently exciting subject will have an especially high profile over the coming years, due to the launch of a number of US and European planetary missions. The programme also aims to build on the wide public interest in the search for life elsewhere in the Solar System, an interdisciplinary topic at the interface between planetary science, astronomy and biology.

Planetary science is necessarily more theoretically oriented than terrestrial geology, and the present programme is designed to develop learning outcomes that are appropriate for students wishing to pursue studies in this area. An emphasis on the multi-disciplinary nature of planetary science is a key aspect of the programme.

### Learning, teaching and assessment methods

The Certificate provides students (both face-to-face and distance learners) with lecture and practical material via Moodle. These comprise PDF files containing full text, diagrams, photographs, video clips and sound clips. The pdfs contains practical material to study and analyse, such as numerical databases, photographic logs of geological traverses, planetary images, and samples including photomicrographs. Students use standard software packages such as Excel, Word, Illustrator, Photoshop, Matlab, statistical packages, and ArcGIS to collate, analyse and present results pertaining to the study of the databases. The Department of Earth and Planetary Sciences.

The Department of Earth and Planetary Sciences has been using such practical material for many years and the staff has experience in designing and implementing such material. The lecture material uses photos, video/sound clips and diagrams to explain the full text provided.

To gain the qualification the learner will have demonstrated the following skills specified in the learning outcomes for approved modules in the programme and for the programme as a whole (albeit to a lower standard than expected for our B.Sc. degrees):

1. Subject Specific
   a) Recognising and using subject-specific theories, paradigms, concepts and principle

2. Intellectual
   a) Powers of observation, analysis and imagination to make decisions in the light of uncertainty
   b) Integration of information from fieldwork, experimental and theoretical investigations and have used both quantitative and qualitative approaches to acquiring and interpreting data

3. Practical
   a) Planning, conducting and reporting investigations including using secondary data
   b) Collecting, recording and analysing data, using appropriate techniques in the field and laboratory
   c) Undertaking investigations in field and laboratory in a safe manner, paying due attention to risk assessment, rights of access, health and safety regulations, and sensitivity to the impact of investigations on the environment and stakeholders

4. Personal and Social
   a) Understanding individual and collective goals and responsibilities and performing in an appropriate way
   b) Recognising and respecting the views and opinions of others
   c) Evaluating individual performance
d) Skills necessary for self-management and lifelong learning (time-management, working independently setting realistic targets)  
e) Adaptable and flexible approach to work and study.

Internal and External factors considered in developing the learning outcomes

The content and nature of the programme is reviewed and updated following:

- engagement with colleagues in other Higher Education Institutions (HEIs) and research institutes, and this provides a valuable source of information and advice;
- experience gained while acting as external examiners;
- participation in teaching/research-orientated workshops as part of staff development;
- attending external meetings where aspects of training, course design and content are discussed;
- interaction with visiting lecturers and external examiners both from within the university and outside the university;

Teaching and learning methods

The teaching team are committed to the provision of face-to-face evening teaching, and the lecture remains central to the learning experience that we provide. Nevertheless, we use a wide range of other teaching methods. This diversity develops independence of learning and critical thought, and illustrates the value and nature of group work and teamwork. All the modules are provided on-line with full text, diagrams and photographs.

About 70% of contact time involves practical classes, problem-solving, and group work.

<table>
<thead>
<tr>
<th>Programme Description</th>
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<tbody>
<tr>
<td>To gain the Certificate of Higher Education in Planetary Science with Astronomy, you must successfully complete the following modules, worth a total of 120 credit points.</td>
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<tr>
<th>Programme Structure</th>
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<tbody>
<tr>
<td><strong>Part Time programme</strong></td>
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<tr>
<td><strong>Year 1</strong></td>
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<table>
<thead>
<tr>
<th>Level</th>
<th>Module Code</th>
<th>Module Title</th>
<th>Credits</th>
<th>Status*</th>
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<tbody>
<tr>
<td>4</td>
<td>EASC001S4</td>
<td>Introduction to Geology</td>
<td>30</td>
<td>Compulsory</td>
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<tr>
<td>4</td>
<td>SCES009H4</td>
<td>Geology of the Solar System I</td>
<td>15</td>
<td>Compulsory</td>
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<td>4</td>
<td>SCES001H4</td>
<td>Foundations of Astronomy</td>
<td>15</td>
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| Year 2 |

<table>
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<th>Module Title</th>
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<tr>
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<td>5</td>
<td>EASC064H5</td>
<td>Introduction to Astrobiology</td>
<td>15</td>
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| Plus a choice of **two** modules from: |

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<thead>
<tr>
<th>Level</th>
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<th>Module Title</th>
<th>Credits</th>
<th>Status*</th>
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<td>Introduction to Geochemistry</td>
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<tr>
<td>4</td>
<td>EASC057H4</td>
<td>Foundations of Mineralogy</td>
<td>15</td>
<td>Option</td>
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<tr>
<td>4</td>
<td>SCES052H4</td>
<td>Assessed Field Techniques 1</td>
<td>15</td>
<td>Option</td>
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<tr>
<td>4</td>
<td>SCES051H4</td>
<td>Earth’s Surface Geology</td>
<td>15</td>
<td>Option</td>
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<tr>
<td>5</td>
<td>EASC005H5</td>
<td>Geophysics</td>
<td>15</td>
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<td><strong>Total 60</strong></td>
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**Status***

CORE – Module must be taken and passed by student  
COMPULSORY – Module must be taken, mark can be reviewed at sub-exam board  
OPTIONAL – Student can choose to take this module
### Regulations

- **Admissions**
  This programme adheres to the College Admissions Policy

- **Credit Transfer**
  Accredited Prior Learning will be considered in line with the College Policy on Accredited Prior Learning

- **Programme Regulations**
  This programme adheres to the College Common Awards Scheme
  [http://www.bbk.ac.uk/registry/policies/regulations](http://www.bbk.ac.uk/registry/policies/regulations)

- **Programme Specific Regulations (or not applicable)** N/A

### Student Attendance Framework – in brief


**Principle**
Consistent and regular student attendance in class (or equivalent) promotes and affords student success. Inconsistent and irregular attendance is less likely to result in student success and is consistent with lower marks and degree classifications being achieved and awarded.

**Attendance expectation**
Birkbeck, University of London expects you to consistently attend all timetabled sessions, including lectures, seminars, group and individual tutorials, learning support sessions, workshops, laboratories, field trips, inductions and demonstrations.

**E-Registers**
All Birkbeck students are issued with student cards. Students are expected to take them to classes and to assessment venues and to present them to a member of staff if requested. This is for the purpose of identifying Birkbeck students.

### Student Support and Guidance

All Birkbeck students have access to a range of student support services, details can be found on our website here: [http://www.bbk.ac.uk/student-services](http://www.bbk.ac.uk/student-services)

### Methods of Enhancing Quality and Standards

The College has rigorous procedures in place for the monitoring and enhancing its educational provision. This includes regular monitoring of programmes drawing on feedback from various sources including external examiner’s reports, student feedback, student achievement and progression data. In addition, departments are reviewed every four to five years through the internal review process that includes external input.

For more information please see the Academic Standards and Quality website [http://www.bbk.ac.uk/registry/about-us/operations-and-quality](http://www.bbk.ac.uk/registry/about-us/operations-and-quality).
<table>
<thead>
<tr>
<th></th>
<th>Programme Director</th>
<th>Professor Ian Crawford</th>
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<tr>
<td>25</td>
<td>Start Date (term/year)</td>
<td>October 2003</td>
</tr>
<tr>
<td>26</td>
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<td>27</td>
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<td>28</td>
<td>Date(s) updated/amended</td>
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