

## Programme Specification

1	<b>Awarding body</b>	University of London					
2	<b>Teaching Institution</b>	<b>Birkbeck College</b>					
3	<b>Programme Title(s)</b>	<b>Cert HE Planetary Science with Astronomy</b>					
4	<b>Programme Code(s)</b>	UCHPSAST_C					
5	<b>UCAS code</b>	N/A					
6	<b>Home Department</b>	Earth and Planetary Sciences					
7	<b>Exit Award(s)</b>	N/A					
8	<b>Duration of Study (number of years)</b>	2 years part time					
9	<b>Mode of Study</b>	FT		PT	X	DL	X
10	<b>Level of Award (FHEQ)</b>	4					
11	<b>Other teaching depts or institution</b>	N/A					
12	<b>Professional, Statutory Regulatory Body(PSRB) details</b>	N/A					
13	<a href="#"><u>QAA Benchmark Statement</u></a>	N/A					

14	<b>Programme Rationale &amp; Aims</b>
	<p><b>Main Aims</b></p> <p>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.</p> <p>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).</p> <p>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.</p> <p><b>Distinctive Features</b></p> <p>The programme will involve part-time, evening, face-to-face study, provision of lecture notes and videos of lectures on-line, and practical sessions.</p>

15	<b>Entry Criteria</b>
	<p>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.</p> <p>However, the main entry criterion is a demonstration of an interest in planetary geology and astronomy.</p>

16	<b>Learning Outcomes</b>
	<p>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.</p> <p>Planetary science is necessarily more theoretically oriented than terrestrial geology, and the 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. See below for programme learning outcomes.</p> <p>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):</p> <ol style="list-style-type: none"> <li>1. Subject Specific       <ol style="list-style-type: none"> <li>a) Recognising and using subject-specific theories, paradigms, concepts and principles</li> </ol> </li> <li>2. Intellectual       <ol style="list-style-type: none"> <li>a) Powers of observation, analysis and imagination to make decisions in the light of uncertainty</li> <li>b) Integration of information from fieldwork, experimental and theoretical investigations and have used both quantitative and qualitative approaches to acquiring and interpreting data.</li> </ol> </li> <li>3. Practical       <ol style="list-style-type: none"> <li>a) Planning, conducting and reporting investigations including using secondary data</li> <li>b) Collecting, recording and analysing data, using appropriate techniques in the field and laboratory</li> <li>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.</li> </ol> </li> <li>4. Personal and Social       <ol style="list-style-type: none"> <li>a) Understanding individual and collective goals and responsibilities and performing in an appropriate way</li> <li>b) Recognising and respecting the views and opinions of others; evaluating individual performance</li> <li>c) Skills necessary for self-management and lifelong learning (time-management, working independently setting realistic targets)</li> <li>d) Adaptable and flexible approach to work and study.</li> </ol> </li> </ol>
17	<b>Learning, teaching and assessment methods</b>
	<p>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</p>

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

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;

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.

18	<b>Programme Description</b>
	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.

19	<b>Programme Structure</b>			
<b>Part Time programme (2 years)</b>				
<b>Year 1</b>				
<b>Level</b>	<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>	<b>Status*</b>
4	SCES057H4	Earth's Interior Geology	15	Compulsory
4	SCES058H4	Methods in Earth and Planetary Science	15	Compulsory
4	SCES009H4	Geology of the Solar System I	15	Compulsory
4	SCES001H4	Foundations of Astronomy	15	Compulsory
			<b>Total 60</b>	
<b>Year 2</b>				
<b>Level</b>	<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>	<b>Status*</b>
5	SCES010H5	Geology of the Solar System II	15	Compulsory
5	EASC064H5	Introduction to Astrobiology	15	Compulsory
		<b>Plus a choice of two modules from:</b>		
4	EASC038H4	Introduction to Geochemistry	15	Option
4	EASC057H4	Foundations of Mineralogy	15	Option
4	SCES052H4	Assessed Field Techniques 1	15	Option
4	SCES051H4	Earth's Surface Geology	15	Option
5	EASC005H5	Geophysics	15	Option
			<b>Total 60</b>	

**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*

20	<b>Programme Director</b>	Professor Ian Crawford
21	<b>Start Date (<i>term/year</i>)</b>	October 2003
22	<b>Date approved by TQEC</b>	Spring 2003
23	<b>Date approved by Academic Board</b>	Summer 2003
24	<b>Date(s) updated/amended</b>	May 2020