

## UNIVERSITY OF CENTRAL LANCASHIRE

### Programme Specification

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided.

***Sources of information on the programme can be found in Section 17***

<b>1. Awarding Institution / Body</b>	University of Central Lancashire
<b>2. Teaching Institution and Location of Delivery</b>	University of Central Lancashire, Preston Campus
<b>3. University School/Centre</b>	Physical Sciences and Computing
<b>4. External Accreditation</b>	RAS (endorsement) IOP (recognition)
<b>5. Title of Final Award</b>	Certificate of Higher Education Astronomy
<b>6. Modes of Attendance offered</b>	Distance Learning
<b>7a) UCAS Code</b>	n/a
<b>7b) JACS Code</b>	F500
<b>8. Relevant Subject Benchmarking Group(s)</b>	QAA: Subject Benchmark Statement for Physics, Astronomy and Astrophysics. Part A: Setting and Maintaining Academic Standards, February 2017. Part B: Assuring and Enhancing Academic Quality of the Quality Code, to be published. QAA: Subject Benchmark Statement for Physics, Astronomy and Astrophysics: Draft for Consultation, April 2016. QAA: Subject Benchmark Statement for Physics, Astronomy and Astrophysics, 2008.
<b>9. Other external influences</b>	National STEM Projects Institute of Physics
<b>10. Date of production/revision of this form</b>	April 2017
<b>11. Aims of the Programme</b>	
<ul style="list-style-type: none"> <li>• To provide an academically rigorous programme of Astronomy education suitable for astronomy enthusiasts with or without previous formal qualifications.</li> <li>• To provide an understanding of the physical laws as applied to the Universe.</li> <li>• To provide a foundation for Level 5 study in Astronomy.</li> </ul>	

- To develop students' awareness of the interrelationships between different areas of astronomy and show how other disciplines may be used to progress astronomy knowledge.
- To provide the opportunity to develop skills and techniques used in astronomy which have wider applications (eg independent working, scientific problem solving, data analysis, preparation of scientific reports and use of IT, communication of scientific ideas).

<b>12. Learning Outcomes, Teaching, Learning and Assessment Methods</b>
<b>A. Knowledge and Understanding</b>
A1. describe and explain physical laws as applied to the Universe. A2. describe and explain the basic structures of the Universe & the processes that take place within it. A3. recognise and explain the development of Astronomy from the historical perspective. A4. explain and implement a selection of techniques of observational astronomy
<b>Teaching and Learning Methods</b>
Course Notes with worked examples, self-test questions and solutions. Classroom tutorials and discussions via Elearn. Feedback to students on assessed work, together with model answers to assessed questions.
<b>Assessment methods</b>
Continuous assessment via course work including: Assessed Questions Sheets, scientific reports, student centred work and researched essays, role-play letters and book review to demonstrate historical perspective.
<b>B. Subject-specific skills</b>
B1. design and implement astronomical observations B2. retrieve and use astronomical information from the web B3. analyse and process astronomical results B4. construct and write scientific reports and essays B5. use simple mathematical tools to solve problems
<b>Teaching and Learning Methods</b>
Conduct observations at home, make measurements and record results. Perform simple data analysis Use appropriate software. Use web resource, office applications and astronomical software. Build skills in maths and physics for level 5 study.
<b>Assessment methods</b>
Assessed reports and essays on scientific investigations (in a variety of forms including written reports, web page and electronic presentation).
<b>C. Thinking Skills</b>
C1. analyse information C2. draw conclusions from astronomical results and information sources C3. solve elementary problems. C4. plan and implement a brief investigation
<b>Teaching and Learning Methods</b>
Observational exercises to do at home. Workbook worked examples, self-test question of simple problem-solving.
<b>Assessment methods</b>
Assessed questions with balance of quantitative and descriptive questions. Scientific reports and essays to apply and develop concepts and synthesise different strands of a problem.
<b>D. Other skills relevant to employability and personal development</b>
D1. use written communication (e.g. scientific reports and essays) D2. use numerical skills D3. Plan and manage own time to achieve specific objectives. D4. use scientific IT skills and electronic communication via email and internet.
<b>Teaching and Learning Methods</b>
Effective communication via the written word and electronic media, such as discussion boards, Use of structured documents. Self-test questions. Manage personal study time to meet course deadlines. Use IT to access course materials, analyse data, produce publication style reports, electronic presentations, etc.
<b>Assessment methods</b>
Researched scientific essays, Experimental reports Mathematical/numerical problems in assessed question sheets.

13. Programme Structures				14. Awards and Credits
Level	Module Code	Module Title	Credit rating	
Level 4	AA1051	Introduction to Astronomy	20	<b>Certificate of Higher Education Astronomy</b> Requires 120 credits at Level 4 or above.
	AA1053	Introduction to Cosmology	20	
	AA1055	IT for Astronomy	20	
	AA1056	Energy, Matter and the Universe	20	
	AA1057	Investigations in Astronomy	20	
	AA1058	Sun, Earth and Climate	20	
	AA1059	Introduction to Astrobiology	20	
	AA1066	Great Astronomers in History	20	
<b>15. Personal Development Planning</b>				
<p>It is particularly important that the PDP offered by our courses is optional and flexible. Currently the following opportunities for PDP exist:</p> <ul style="list-style-type: none"> <li>• The admissions process includes interaction between Course Leader and applicant, advising on suitability of the course, given a student's aspirations for short or long-term study.</li> <li>• The induction process, using Handbook and Elearn links, provides opportunities for students to use the University's Skills and PDP resources.</li> <li>• The Distance Learning courses provide a structured environment for independent learning and time management, to pace study and meet coursework deadlines.</li> <li>• Self-test exercises encourage students to assess their academic progress within a module.</li> </ul>				
<b>16. Admissions criteria</b> (including agreed tariffs for entry with advanced standing) <i>*Correct as at date of approval. For latest information, please consult the University's website.</i>				
Entry to the Cert HE will normally be via the successful completion of at least one Certificate, preferably the Certificate in Astronomy (or equivalent.) Applicants for the Certificate in Higher Education in Astronomy will therefore normally have GCSE grade C in Mathematics and English or equivalent, as required for the individual certificates.				
<b>17. Key sources of information about the programme</b>				
Student Handbook Astronomy Module Catalogue uclan website www.StudyAstronomy.com				
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## 18. Curriculum Skills Map

Level	Module Code	Module Title	Core (C), Compulsory (COMP) or Option (O)	Programme Learning Outcomes																	
				Knowledge and understanding				Subject-specific Skills					Thinking Skills				Other skills relevant to employability and personal development				
				A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	C4	D1	D2	D3	D4	
LEVEL 4	AA1051	Introduction to Astronomy	Compulsory	√	√		√	√		√	√			√	√	√	√	√	√	√	
	AA1053	Introduction to Cosmology	O	√	√	√	√				√			√	√		√	√	√	√	
	AA1055	IT for Astronomy	O						√	√	√		√			√	√	√	√	√	
	AA1056	Energy, Matter and the Universe	O		√							√			√			√	√	√	
	AA1057	Investigations in Astronomy	O	√		√	√		√		√		√	√	√	√	√		√	√	
	AA1058	Sun, Earth and Climate	O	√	√	√	√	√		√	√			√	√	√	√	√	√	√	
	AA1059	Introduction to Astrobiology	O	√			√		√		√	√	√	√	√		√	√	√	√	
	AA1066	Great Astronomers in History	O			√					√		√			√		√			

**Note:** Mapping to other external frameworks, e.g. professional/statutory bodies, will be included within Student Course Handbooks

### 19. LEARNING OUTCOMES FOR EXIT AWARDS:

**No exit awards are available for Certificate of Higher Education awards.**