

# MODULE DESCRIPTOR

<b>MODULE TITLE</b>	Exploring the Solar System					
<b>MODULE CODE</b>	AA2054 (L5)	<b>JACS CODE</b>	F520	<b>CREDIT VALUE</b>	20 credits	
<b>DATE OF APPROVAL</b>	April 2017				<b>VERSION NUMBER</b>	1
<b>SCHOOL</b>	Physical Sciences and Computing	<b>PARTNER INSTITUTION</b>		N/A		

## RELATIONSHIP WITH OTHER MODULES

<b>Co-requisites</b>	NONE	<b>Pre-requisites</b>		<b>Excluded Combinations</b>	None
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## MODULE AIMS

This module aims to:

- Provides an introduction to the Solar System complementing stellar and galactic work covered elsewhere in the Astronomy degree programmes.
- Introduce students to images and results from recent space research and exploration.
- Develop students' research skills
- Develop students' communication skills.

## MODULE CONTENT

### INTRODUCTION

An overview of the Solar System: its structure, scale and content.

### OVERVIEW OF SPACE EXPLORATION

History, the motivation, technology, past present and future missions.

Methods of exploration: remote observation and space probes.

Prospects for future exploration and colonisation; mining mineral resources beyond the Earth.

Outstanding questions in planetary studies.

### THE SUN: OUR NEAREST STAR

The Sun in context as the powerhouse of the Solar System.

This includes how the Sun's influence is felt by bodies in the Solar System (including the Earth) and how its evolution will affect those bodies.

### THE EARTH AND TERRESTRIAL ENVIRONMENT

The Earth as a planet: its atmosphere, surface, and interior.

Origin, structure, and evolution of the atmosphere – including man made influences.

Humanities interaction with their planet.

### THE PLANETS AND THEIR SATELLITES

The terrestrial planets: application of Earth sciences to other worlds.

The giant planets and their systems.

Comparison of the properties of the planets and satellites: atmospheres, surfaces, interiors.

### HISTORY OF THE SOLAR SYSTEM

Origin and history of the Sun and planets as supported by evidence.

Comparison and evidence from extrasolar planets.

## INTENDED LEARNING OUTCOMES

On successful completion of this module a student will be able to:

1.	Describe, compare and contrast the contents of the Solar System and the Sun
2.	Explain the processes underlying the similarities and differences between Earth and the other planets
3.	Discuss how space exploration contributes to our current understanding of the Solar System
4.	Collect and collate material from a variety of sources and write a substantial, coherent essay in this subject area
5.	Use IT software to present information about a space mission or similar topic.

## ASSESSMENT METHODS

The method of assessment for this module has been designed to test all the learning outcomes. Students must demonstrate successful achievement of these learning outcomes to pass the module.

Number of Assessments	Form of Assessment	% weighting	Size of Assessment/Duration/ Wordcount	Category of assessment	Learning Outcomes being assessed
1	Question Sheet	40%	A portfolio of questions & activities (equivalent to 1600 words)	Coursework	1,2
1	Preparation of a presentation	20%	7-10 slides (equivalent to 12 minute presentation)	Coursework	3,5
1	Researched essay	40%	1600 words	Coursework	3,4

## MODULE PASS REQUIREMENTS

To pass this module you must achieve a mark of 40% or above, aggregated across all the assessments.

## APPENDIX

**MODULE CODE:** AA2054 (L5)

**MODULE TITLE:** Exploring the Solar System

**LOCATION OF STUDY:** UCLAN CAMPUS

<b>MODULE TUTOR(S)</b>	Jason Kirk
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<b>MODULE DELIVERY</b>	Semester Long	Semester 1		Semester 2		Semester 3	
	Year long	Semester 1 & 2		✓	Semester 2 & 3		
	Other (please indicate pattern of delivery)	DISTANCE LEARNING					

### MODULE LEARNING PLAN

All modules should include details of the average learning time based upon 200 hours per 20 credits.

<b>LEARNING, TEACHING AND ASSESSMENT STRATEGY</b>	
<p><b>Distance learning</b> students will learn via self-study, supported by detailed distance learning material supplied by the Course Team according to a Course Schedule. Tutorial support for off-campus students will be provided by e-mail, electronic discussion groups and telephone. Students will be encouraged to participate in on-line or class discussions.</p> <p>A <i>Study Guide</i> containing directed reading from recommended textbooks, internet resources. This is supported by tutorials and on-line discussions. Students will have access (e.g. through Blackboard) to self-test questions. The essay and presentation assessments will be prefaced by appropriate tutorial guidance on content and preparation.</p> <ul style="list-style-type: none"> <li>The assessed question sheet is designed to enable students to demonstrate their understanding and ability to solve problems and explain the concepts involved.</li> <li>The presentation encourages students to use recent results from the literature, enhancing their experience of refereed journals. It also develops their skills in using IT to produce a presentation.</li> <li>The essay titles are chosen to be topical, reflecting recent solar system research. The essay is designed to enable students to develop their research skills and ability to summarise results, draw conclusions and write them up in a formal essay.</li> </ul>	
<b>SCHEDULED LEARNING AND TEACHING ACTIVITY</b>	<i>No. of hours</i>
Tutorial	8
<b>TOTAL SCHEDULED LEARNING HOURS</b>	8
<b>GUIDED INDEPENDENT STUDY</b>	
<p><i>First reading of posted materials (equiv to lectures)</i>  <i>Working through details</i>  <i>Background reading</i>  <i>Working on coursework assignments</i>  <i>Reflection on feedback</i></p>	
<b>TOTAL GUIDED INDEPENDENT STUDY HOURS</b>	192
<b>TOTAL STUDENT LEARNING HOURS</b> (eg 200 hours per 20 credits)	200

## **BIBLIOGRAPHY AND LEARNING SUPPORT MATERIAL**

On-line Booklist: <http://readinglists.central-lancashire.ac.uk/search.html?q=aa2054>