

Module Catalogue

*Department of Physics, Astronomy and Mathematics*

**A DIRECTORY OF UNDERGRADUATE MODULES FOR EXCHANGE AND STUDY ABROAD STUDENTS**

SEMESTER A, B AND AB 2022/23

List of Modules

Semester A

[INTRODUCTION](#bookmark0)

***Module name: Mathematical Methods***

Module code: 4PAM2006

***Module name: Numbers and Sets***

Module code: 4PAM2010

***Module name: Probability and Statistics***

Module code: 4PAM2008

***Module name: Mathematical Techniques 2***

Module code: 5PAM1022

***Module name: Programming***

Module code: 5PAM1023

***Module name: Algebra***

Module code: 5PAM1028

***Module name: Number Theory***

Module code: 5PAM1026

***Module name: Motion and Tensors***

Module code: 5PAM1053

***Module name: Partial Differential Equations***

Module code: 6PAM1023

***Module name: Linear Optimisation***

Module code: 6PAM1024

***Module name: Further Algebra***

Module code: 6PAM1025

***Module name: Lagrangian Dynamics***

Module code: 6PAM1061

***Module name: Complex Analysis***

Module code: 6PAM1020

***Module name: Linear Modelling***

Module code: 6PAM1037

***Module name: Electromagnetism***

Module code: 5PAM1044

***Module name: Physics of the Solar System***

Module code: 5PAM1050

***Module name: Space Science and Systems***

Module code: 5PAM2000

***Module name: Condensed States of Matter***

Module code: 6PAM1050

***Module name: The Physics of Astronomical Spectra***

Module code: 6PAM157

***Module name: Foundations of Cosmology***

Module code: 6PAM1056

Semester B

***Module name: Linear Algebra***

Module code: 4PAM2014

***Module name: Financial and Actuarial Mathematics***

Module code: 4PAM2012

***Module name: Applications of Calculus***

Module code: 4PAM2016

***Module name: Computational Modelling***

Module code: 4PAM2018

***Module name: Real Analysis*** Module code: 5PAM1002

***Module name: Differential Equations***

Module code: 5PAM1032

***Module name: Numerical Methods***

Module code: 5PAM1029

***Module name: Statistical Modelling***

Module code: 5PAM1033

***Module name: Further Numerical Methods***

Module code: 6PAM1027

***Module name: Nonlinear Optimisation***

Module code: 6PAM1028

***Module name: Combinatorics***

Module code: 6PAM1029

***Module name: Nonlinear Systems***

Module code: 6PAM1030

***Module name: Multivariate Statistics***

Module code: 6PAM1036

***Module name: Quantum Mechanics***

Module code: 5PAM1047

***Module name: Optics and Lasers***

Module code: 5PAM1045

***Module name: Thermodynamics***

Module code: 5PAM1046

***Module name: Extra-Solar Planets***

Module code: 5PAM1051

***Module name: Plasma Physics and Fusion Reactors***

Module code: 5PAM1052

***Module name: The Physics of Elementary Particles***

Module code: 6PAM1051

***Module name: Quantum Optics and Information Theory***

Module code: 6PAM1059

***Module name: Geophysical Fluid Dynamics***

Module code: 6PAM1053

***Module name: Space Dynamics***

Module code: 6PAM0027

***Module name: Star Formation and Evolution***

Module code: 6PAM1055

***Module name: The Early Universe and Galaxy Formation***

Module code: 6PAM1058

Semesters A&B

***Module name: Financial Markets and Portfolio Theory***

Module code: 5PAM1030

***Module name: Financial Mathematics & Derivative Pricing***

Module code: 6PAM1031

***Module name: Special Relativity and Quantum Physics***

Module code: 4PAM1066

***Module name: The Physical Universe***

Module code: 4PAM1013

***Module name: Mathematical Project and Investigative Skills***

Module code: 6PAM2000

***Module name: Physics Project and Investigative Skills***

Module code: 6PAM1052

[***Module name:***](#bookmark83) ***Astrophysics Project and Investigative Skills***

Module code: 6PAM1054

# INTRODUCTION

This module directory is specifically designed for exchange students to select modules at School of Physics, Astronomy and Mathematics, University of Hertfordshire.

## Please see the box below explaining the module codes:

|  |  |  |
| --- | --- | --- |
| 4PAM1034 | | |
| **4** | **PAM** | **1034** |
| Module level | School of study | Module code |

1. As an exchange student you can choose modules from levels 5, 6 and exceptionally at level 4.

|  |  |  |
| --- | --- | --- |
| **Level 4** | **Level 5** | **Level 6** |
| First Year module | Second year module | Third Year module |

1. Co-requisites, pre-requisites and prohibited combinations.

Some of the modules may have co-requisites or pre-requisites which you will find indicated in each module. Please note for you, as an exchange student, *if a module has co-requisites or pre-requisites you must have previously studied the subject and have completed the relevant module(s) at your home institution.* When sending your application, please include a copy of your transcript to show that you have taken the minimum required co-requisites or pre-requisites module(s) at your home institution. Additionally, we may require you to provide a module description in order to evidence prior study.

If you are in the process of completing the required module(s) at the time of the application and you do not have the final copy of the transcript, please include a letter from your home institution clearly listing the modules that you are registered on.

**Prohibited combinations-** please note if there are modules listed under prohibited combinations you can only study one of the modules.