Programme Specification

This specification provides a 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 they take full advantage of the learning opportunities that are provided.

The content of our courses is reviewed annually to make sure it's up-to-date and relevant. Individual modules are occasionally updated or withdrawn. This is in response to discoveries through our world-leading research; funding changes; professional accreditation requirements; student or employer feedback; outcomes of reviews; and variations in staff or student numbers. In the event of any change we will inform students and take reasonable steps to minimise disruption.

Programme Details

1. Programme title	Mathematics and Philosophy		
2. Award type	Bachelor of Science		
3. Programme details	**FHEQ Level:** 6	**Mode of Study:** Full time	**Duration:** 3 years
4. Faculty	Faculty of Science		
5. School	**Owning:** School of Mathematical and Physical Sciences **Shared with:** School of History, Philosophy and Digital Humanities		
6. Accrediting Professional or Statutory Body	None		
7. HECoS code *Select between one and three codes from the HECoS vocabulary.*	**Code:** 100403 **Percentage:** 50	**Code:** 100337 **Percentage:** 50	**Code:** **Percentage:**
Programme code (internal use)	MPSU014		

9. Programme aims

	The programme aims to:
A1	Provide degree programmes with internal choice to accommodate the diversity of students' interests and abilities.
A2	Provide an intellectual environment conducive to learning.
A3	Prepare students for careers which use their mathematical and/or statistical training.
A4	Provide teaching which is informed and inspired by the research and scholarship of the staff.
A5	Provide students with assessments of their achievements over a range of mathematical and statistical skills, and to identify and support academic excellence.
A6	Provide an appropriate mathematics component for a dual degree programme with Philosophy.
A7	Equip students with an understanding of a range of philosophers and philosophical problems, while encouraging as deep a critical engagement with those philosophers and problems as is feasible in the time available.
A8	Promote respect for the norms of – clarity; careful analysis; critical reflection; rational argument; sympathetic interpretation and understanding; and impartial pursuit of truth.
A9	Promote independence of thought and a critical and analytical approach, not only to theories and concepts, but to the assumptions on which they are based.
A10	Equip students with the core skills involved in – careful reading, comprehension and compression of textual material; clear thinking; sound argumentation; and the clear and well-organised expression of ideas.
A11	Facilitate an awareness of the application of philosophical thought to other academic disciplines or to matters of public interest, encouraging students to apply philosophical skills more widely where appropriate.
A12	Encourage students to plan for themselves the contents of their degree programmes in philosophy, and to plan and organise their own work, within the constraints and advice provided by the Department.
A13	Respond to the diversity of student interests by allowing both the combination of the subject of study with subjects offered by other providers and a level of student choice within each programme of study appropriate to that programme.
A14	Recruit highly qualified students, while at the same time providing access for those with non-standard qualifications who can benefit successfully from the appropriate level of degree work.

10. Programme learning outcomes

Knowledge and understanding (K)	
On successful completion of the programme, students will be able to demonstrate knowledge and understanding of:	
K1	The methods of linear mathematics and advanced calculus.

K2	Key fundamental concepts in each of Pure Mathematics, Applied Mathematics and Probability & Statistics, including some more specialist mathematical or statistical topics.
K3	A critical awareness of some of the central distinctions and arguments in moral and political philosophy, epistemology, metaphysics, philosophy of mind and language.
K4	An in-depth knowledge and understanding of some central areas of Western analytical philosophy.
K5	Knowledge of the theories and arguments of some of the major philosophers, encountered in their own writings, and some awareness of important areas of interpretative controversy concerning those philosophers.
K6	The ability to use and understand properly specialised philosophical terminology.
K7	Understanding of some major issues currently at the forefront of philosophical debate and research.

Skills and other attributes (S)

When considering the skills and attributes developed in this programme, please refer to the Sheffield Graduate attributes (SGAs). SGAs can be found here

On successful completion of the programme, students will be able to:

S1	Demonstrate skill in calculation and manipulation.
S2	Understand and evaluate logical arguments, identifying the assumptions and conclusions made, and develop their own arguments.
S3	Demonstrate the skills to model and analyse physical or practical problems, including the use of computer packages.
S4	Present arguments and conclusions effectively and accurately.
S5	Appreciate the development of a general theory and its application to specific instances.
S6	Acquire further necessary mathematical skills, if appropriate, to consider careers as practising mathematicians or statisticians.
S7	Appreciate the philosophical background to scientific arguments.
S8	Ability to read carefully and interpret philosophical texts, and to identify textually-based arguments.
S9	Ability to analyse the structure of complex and controversial problems, with an understanding of major strategies of reasoning designed to resolve such problems.
S10	Ability to abstract, analyse and assess arguments carefully, distinguishing what is relevant to the issue under discussion from what is not.
S11	Ability to recognise the strengths and weaknesses of arguments for and against a philosophical position.
S12	Ability to construct a detailed individual line of argument in support of one's own position and defend it in a clear and effective manner.

S13	Ability to manage time effectively by working to deadlines.
S14	Ability to work autonomously to research and produce substantial pieces of writing to specified standards of content and presentation.
S15	Ability to use libraries and IT resources effectively for the purposes of searching for and acquiring relevant information.

11. Learning and teaching methods *(this should include a summary of methods used throughout the programme, including any unique features and should be written with a student focus as this information will display to current students and applicants i.e. prospectus)*

To make sure you get the skills and knowledge that every mathematician needs, you'll learn through lectures, small group tutorials and problems classes, and research projects. Some modules also involve programming classes.

We invest to create the right environment for you. That means outstanding facilities, study spaces and support, including 24/7 access to our online library service.

Study spaces and computers are available to offer you choice and flexibility for your study. Our five library sites give you access to over 1.3 million books and periodicals. You can access your library account and our rich digital collections from anywhere on or off campus. Other library services include study skills training to improve your grades, and tailored advice from experts in your subject.

Learning support facilities and library opening hours

12. Assessment and feedback methods *(this should include the range of types of methods used and should be written with a student focus as this information will display to current students and applicants i.e. prospectus)*

You'll be assessed in a variety of ways, depending on the modules you take. This can include quizzes, examinations, presentations, participation in tutorials, projects, coursework and other written work.

Feedback will be provided during the semester through marked assessments as well as through discussion time in tutorials and problems classes.

Version Number:	Purpose / Change:	Cohort affected: (academic year and level)	Date change approved:
1			March 2012
2			March 2016
3			September 2021
4			September 2022

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