

# MA4K8-30 Project (Maths in Action)

**20/21**

**Department**

Warwick Mathematics Institute

**Level**

Undergraduate Level 4

**Module leader**

David Wood

**Credit value**

30

**Module duration**

20 weeks

**Assessment**

Multiple

**Study location**

University of Warwick main campus, Coventry

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## Description

### Introductory description

N/A

[Module web page](#)

### Module aims

The broad aims are: to develop student's ability to communicate mathematics to diverse audiences and to give a deeper appreciation of how mathematics underpins the modern world.

### Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

The Maths-in-Action Projects will show how some of the mathematics learnt at Warwick affects contemporary life and technology. Examples of themes that have been used in the past include:

Theme 1: Quantum Computing

Theme 2: Tomography - Imaging our Insides

Theme 3: Evolution

Theme 4: Space Travel

Theme 5: Weather Forecasting

Theme 6: The Human Cell

Theme 7: Virtual Reality

Each theme will be restricted to at a limited number of takers, students state a preference when registering and the department makes allocations based on these preferences and timeliness of registrations.

Students taking a Maths-in-Action project are encouraged, though not obliged, to work in pairs on their Public Presentations.

Support: The main support for the Maths-in-Action projects are:

- The Maths-in-Action Resources page describing how to get started and what to do next. It also is the main source of news and valuable information for the Maths-in-Action projects.
- A Project Guide containing advice on how to make good presentations and explaining the criteria that will be used in assessing your work.

## Learning outcomes

By the end of the module, students should be able to:

- Have developed the ability to communicate mathematics to diverse audiences and have a deeper appreciation of how mathematics underpins the modern world.
- Carry out independent research into existing results, access and extract relevant information from suitable publications and other sources, organise time effectively.
- Doing a Maths-in-Action project will teach the art of scholarship; it will help to acquire a variety of presentation skills and improve scientific word-processing and typesetting.
- Fruitful collaboration is a valuable experience and they will have the chance to work cooperatively on a public presentation.

## Subject specific skills

See learning outcomes.

## Transferable skills

Students will acquire key reasoning and problem solving skills which will empower them to address new problems with confidence.

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## Study

### Study time

Type	Required
Project supervision	10 sessions of 1 hour (3%)
Private study	288 hours (97%)
Total	298 hours

## Private study description

288 hours private study

## Costs

No further costs have been identified for this module.

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## Assessment

You do not need to pass all assessment components to pass the module.

### Assessment group A2

	Weighting	Study time
Scholarly Report and Viva 30 pages max dissertation. 25 minutes	60%	
Presentation/Poster Presentation and poster	15%	
Popular Article 3000 words	20%	
Progress Report Form+Draft Poster. 3 Pages	5%	

### Assessment group R

	Weighting	Study time
Summary	100%	

## Feedback on assessment

Presentation feedback and exam feedback.

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## Availability

## Courses

This module is Core for:

- Year 5 of UMAA-G105 Undergraduate Master of Mathematics (with Intercalated Year)
- UMAA-G103 Undergraduate Mathematics (MMath)
  - Year 4 of G103 Mathematics (MMath)
  - Year 4 of G103 Mathematics (MMath)
- Year 4 of UMAA-G106 Undergraduate Mathematics (MMath) with Study in Europe

This module is Core optional for:

- Year 5 of UMAA-G105 Undergraduate Master of Mathematics (with Intercalated Year)
- UMAA-G103 Undergraduate Mathematics (MMath)
  - Year 4 of G103 Mathematics (MMath)
  - Year 4 of G103 Mathematics (MMath)
- Year 4 of UMAA-G106 Undergraduate Mathematics (MMath) with Study in Europe

This module is Core option list D for:

- Year 4 of UMAA-GV19 Undergraduate Mathematics and Philosophy with Specialism in Logic and Foundations

This module is Option list A for:

- Year 1 of TMAA-G1P0 Postgraduate Taught Mathematics