

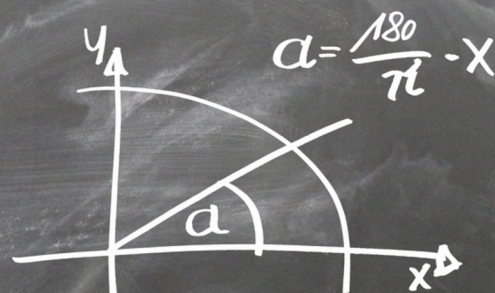


OLLSCOIL NA  
GAILLIMHE  
UNIVERSITY  
OF GALWAY

Coláiste na nDán, na nEolaíochtaí  
Sóisialta & an Léinn Cheiltigh  
College of Arts, Social Sciences  
& Celtic Studies

# Mathematics

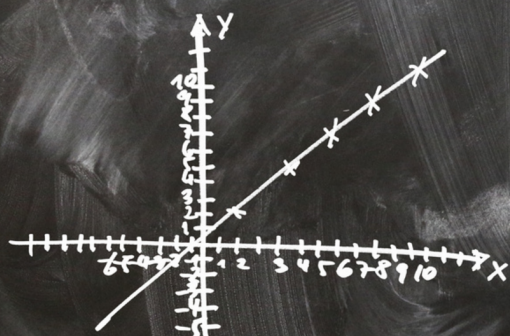
$$X_{1/2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



$$X^2 + px + q = 0$$



$$X_{1/2} = -\frac{p}{2} \pm \sqrt{\left(\frac{p}{2}\right)^2 - q}$$



$$X = b - 2y$$

$$X + a = b$$

$$f(x) = \tan x$$

$$f(x) = \sin x$$

# Subject Overview

Mathematics and Mathematical Studies incorporate Mathematics, Statistics and their applications. Mathematics is the language for the logical study of the structure of our world. It has developed from counting, calculating and measuring, through the use of abstraction and analogy, by recognizing the fundamental role that comparisons play in the mental process of 'understanding'. It is an area of great beauty based on highly evolved concepts and language. It provides a continuous link through the intellectual, cultural and technological development of the human race over the last 5,000 years.

## **Mathematics or Mathematical Studies?**

Students can opt to study towards a Mathematics BA or Mathematical Studies BA. The former is a traditional programme that covers a wide range of topics in mathematics, statistics, applications and history of mathematics with an emphasis on theoretical and abstract aspects. The Mathematical Studies programme covers a similar range of topics but takes a more concrete approach, with more emphasis on the context of mathematics and its relevance to other areas of human activity.

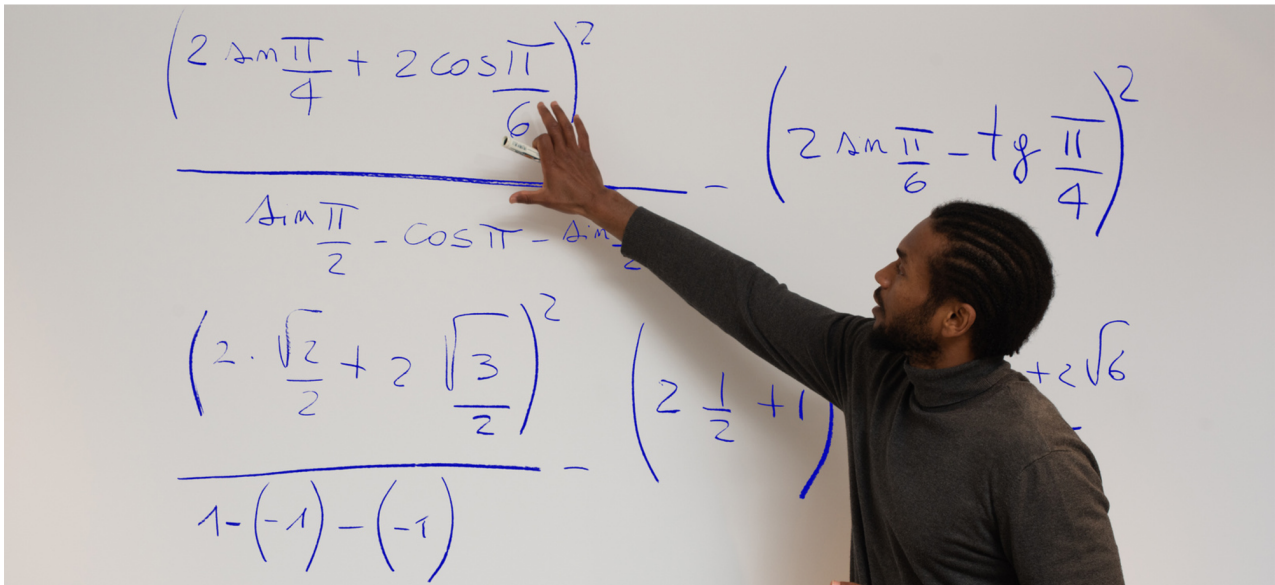
**Subject Name:** Mathematics

**CAO Code:** GY101

**CAO Entry Points 2024:** 300

**Duration:** 3 Years BA / 4 Years BA (International)

**Entry Requirements:** Minimum Grade H5 in two subjects and passes in four other subjects at O6/H7 in the Leaving Certificate, including Irish, English, another language and three other subjects recognised for entry purposes. Minimum Grade of H5 or O1 in Leaving Certificate Mathematics, or equivalent, is recommended



## Why study Mathematics / Mathematical Studies at University of Galway?

- If you enjoyed Mathematics at school, you can expect to enjoy it even more at university as you broaden and deepen your understanding.
- The School of Mathematical and Statistical Sciences at University of Galway has a team of dedicated and enthusiastic teachers who are committed to making your experience as fulfilling as possible.
- The resources available to support your mathematical learning at University of Galway are excellent. All modules will be supported by weekly tutorials where you can ask questions and discuss examples. In addition you will have daily access to the SUMS Centre, which is open for 20 hours per week for students to drop in for expert advice on mathematical questions.
- The flexibility of the Arts programme in Galway allows you an opportunity to explore your interests before choosing your two degree subjects from the three that you study in the first year. There are many excellent companions for Mathematics in an Arts degree.
- Employment prospects for mathematics graduates are exciting, diverse and plentiful.

## What will I be studying?

The first year of this programme consists of a broad-ranging introduction to all aspects of Mathematics, its applications and its historical and cultural development. After first year, students will have the possibility to continue to degree level either in Mathematics or in Mathematical Studies. As you progress through the degree you will have opportunities to study areas such as geometry, linear algebra, real and complex analysis, statistics, abstract algebra, cryptography, discrete mathematics and mathematics education, as well as some of the contexts and applications of these subjects.

## Careers and Further study

Career opportunities for mathematics graduates are diverse and interesting. They have skills that are highly valued by employers, such as the ability to think rationally, process complex data reliably, construct and use mathematical models, and interpret quantitative information.

Graduates find employment in a wide range of areas, including the financial sector, the IT and software industry, the MET service, the civil service and the teaching profession. Opportunities also exist for further study and research in Mathematics either in Galway or elsewhere.

## Frequently Asked Questions

### Is it difficult?

The study of any subject to degree level is challenging, so you will need to work consistently. In all mathematics and mathematical studies modules the learning outcomes and expectations will be very clear, and you will be provided with regular feedback on your work. You will have access to continuous support from your lecturers and tutors and from the SUMS Centre. You can expect to succeed very well if you work hard and make use of the resources that are provided.

### Will I be qualified as a mathematics teacher?

The Mathematics and Mathematical Studies programmes are both recognized by the Teaching Council of Ireland as meeting the subject requirements for teachers of mathematics to Leaving Certificate (Higher) Level. After completing your degree and the two-year Professional Masters in Education (which qualifies you to work in the teaching profession), you will be a fully qualified mathematics teacher. Many of our Arts graduates are currently doing excellent work as mathematics teachers.

## Find Out More

Prof Götz Pfeiffer

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W: [www.universityofgalway.ie/science-engineering/school-of-maths/undergraduate-degrees/](http://www.universityofgalway.ie/science-engineering/school-of-maths/undergraduate-degrees/)