

CAREER GUIDE 2025-26

Mathematics vs Applications of Mathematics

This guide explains how [Mathematics](#) and [Applications of Mathematics](#) align with different career paths. The information is subject to change and is not a comprehensive list, so always check specific course or career requirements.



Mathematics focuses on algebra, calculus, and problem-solving, making it essential for STEM careers.



Applications of Mathematics covers numeracy, finance, and data handling for everyday use and non-STEM fields.



Applications of Mathematics IS likely a suitable alternative to Mathematics, when applying to:

Acting	Agriculture
Art	Childcare
Criminology	Dance
*Dental Nursing/Oral Health	English
Fire Service	Film and Media
*Geography	Graphic Design
Hair and Beauty	History
Hospitality	Joinery
Journalism	Law
Languages	*Midwifery
Music	*Nursing
*Paramedic Science	Philosophy
*Physiotherapy	Plumbing
*Police	Politics
Social Work	*Teaching
Theatre	Tourism

*Further detail – [when it IS likely to be suitable](#)



Applications of Mathematics MAY be a suitable alternative to Mathematics

Accounting and Finance*	Architecture*
Armed Forces/Military*	Business*
Computing*	Economics*
Electrical (Electrician) *	Psychology*
Sports*	

*Further detail – [when it MAY be suitable](#)



Applications of Mathematics is NOT recommended as an alternative to Mathematics

Dentistry*	Engineering*
Mathematics*	Medicine*
Science*	

*Further detail – [when it is NOT recommended](#)

*Further Detail



When Applications of Mathematics IS likely to be a suitable alternative to Mathematics

Dental Nurse/Oral Health

The following courses offer training in Dental Nursing/Oral Health and have no Mathematics requirements:

- [Glasgow Caledonian University BSc Oral Health Science](#)
- [New College Lanarkshire HNC Dental Nursing](#)
- [University of the Highlands and Islands BSc Oral Health Sciences](#)

Geography

For example, both the [MA Geography](#) and [BSc Geography](#) at the University of Edinburgh accept Mathematics or Applications of Mathematics.

Midwifery

There are three universities in Scotland that offer degrees in midwifery. They all require Mathematics or Applications of Mathematics at National 5 Grade C

- [Edinburgh Napier University](#)
- [Robert Gordon University](#)
- [University of West of Scotland](#)

Nursing

Some nursing degrees require National 5 Mathematics or Applications of Mathematics, such as [Glasgow Caledonian University](#)

Paramedic Science

Some Paramedic Science degrees require National 5 Mathematics or Applications of Mathematics, such as [Glasgow Caledonian University](#) and [Queen Margaret University](#).

Physiotherapy

There are three universities in Scotland offering degrees in physiotherapy.

- [Glasgow Caledonian University](#) – No Mathematics requirement
- [Queen Margaret University](#) - Requires National 5 Mathematics or Applications Mathematics. Two of Biology, Physics, Chemistry or Mathematics/Applications of Mathematics at Higher*
- [Robert Gordon University](#) - two from Biology/Human Biology, Chemistry, Mathematics/Applications of Mathematics and Physics*

Police

You **do not need** any formal qualifications to become a police officer with Police Scotland.

The application process involves the [Police Scotland Entrance Test \(PSET\)](#), which includes a numeracy element. Applications of Mathematics is a suitable subject to prepare for this.

Teaching

National 5 Mathematics or Application of Mathematics at C is required.

For an example, see the [University of Edinburgh](#)



When Applications of Mathematics MAY be a suitable alternative to Mathematics

Accounting and Finance

Examples where Applications of Mathematics is a suitable alternative:

- [Dundee University BAcc \(Hons\) Accountancy](#)
- [Queen Margaret University BA \(Hons\) Business Management with Finance](#)
- [University of the Highlands and Islands BA \(Hons\) Accounting and Finance](#)
- [University of Strathclyde BA Hons Accounting – ‘Mathematics or Applications of Mathematics is required for Accounting’](#)

Examples where Applications of Mathematics is not a suitable alternative:

- [University of Edinburgh MA Accounting and Finance](#) – National 5 Mathematics is required. National 5 Applications of Mathematics is not accepted as an alternative, but Higher Applications of Mathematics is accepted as an alternative

Architecture

Examples where Applications of Mathematics is a suitable alternative:

- [Dundee University Architecture MArch \(Hons\)](#)
- [Edinburgh Napier University BSc \(Hons\) Architectural Technology](#)
- [Glasgow School of Art BArch Architecture](#)
- [Robert Gordon University BSc/MArch Architecture](#)

Examples where Applications of Mathematics is not a suitable alternative:

- [University of Edinburgh BA/MA Architecture](#)
- [University of Strathclyde BSc \(Hons\) Architectural Studies – more information](#)

Armed Forces/Military

The requirements will vary by role. For example, there are no formal qualifications needed to join the [British Army as an infantry soldier](#), but for engineering roles across all branches of the Armed Forces, Applications of Mathematics is not recommended as an alternative to Mathematics.

Business

Examples where Applications of Mathematics is a suitable alternative:

- [Edinburgh College HNC Business](#)
- [Queen Margaret University BA \(Hons\) Business Management](#)
- [Strathclyde University BA \(Hons\) Business](#)
- [University of the Highlands and Islands HND Business](#)

Examples where Applications of Mathematics is not a suitable alternative:

- [Edinburgh University MA Business Management](#) – National 5 Mathematics is required. National 5 Applications of Mathematics is not accepted as an alternative, but Higher Applications of Mathematics is accepted as an alternative

Computing

Examples where Applications of Mathematics is a suitable alternative:

- [Edinburgh Napier University BEng \(Hons\) Computing](#)
- [Glasgow Caledonian University BSc \(Hons\) Computing](#)

Examples where Applications of Mathematics is not a suitable alternative:

- Edinburgh College [HNC Computing](#) and [HND Computer Games Development/Software Development/Computer Networking/Cyber Security](#)
- [Edinburgh University BEng Computer Science](#)

Economics

Examples where Applications of Mathematics is a suitable alternative:

- [University of Dundee BSc \(Hons\) Economics](#)
- [University of Stirling BSc \(Hons\) Economics](#)

Examples where Applications of Mathematics is not a suitable alternative:

- [Edinburgh University MA \(Hons\) Economics](#)

Electrical (Electrician)

For example, the [Pre-Apprenticeship Electrical Installation](#) course at Forth Valley College accepts Applications of Mathematics. While Applications of Mathematics is generally suitable for becoming an electrician, Mathematics may be beneficial for more advanced roles.

Psychology

Examples where Applications of Mathematics is a suitable alternative:

- [Abertay University BSc \(Hons\) Psychology](#)
- [Dundee University BSc \(Hons\) Psychology](#)
- [Edinburgh Napier University BA \(Hons\)/ BSc \(Hons\) Psychology](#)
- [Strathclyde University BA \(Hons\) Psychology](#)
- [St Andrews University BSc/MA \(Hons\) Psychology](#)
- [University of the Highlands and Islands BSc \(Hons\) Psychology](#)

Examples where Applications of Mathematics is not a suitable alternative:

- [Edinburgh University BSc \(Hons\) Psychology](#)

Sports

Examples where Applications of Mathematics is a suitable alternative:

- [Aberdeen University BSc \(Hons\) Sports And Exercise Science](#)
- [Abertay University BSc \(Hons\) Sports Development and Coaching](#)
- [Heriot Watt University BSc \(Hons\) Sport and Exercise Science](#)
- [Stirling University BA \(Hons\) Sport Development and Coaching](#)

Sports continued over

Examples where Applications of Mathematics is not a suitable alternative:

- [Edinburgh Napier University BSc \(Hons\) Sports Coaching](#) – National 5 Mathematics is required. National 5 Applications of Mathematics is not accepted as an alternative, but Higher Applications of Mathematics is accepted as an alternative
- [University of Edinburgh BSc \(Hons\) Applied Sport Science](#)



When Applications of Mathematics is NOT recommended as a suitable alternative to Mathematics

Dentistry

Dentistry is highly competitive, and anyone wishing to pursue it is advised to take Mathematics rather than Applications of Mathematics to maximise their chances.

The University of Glasgow requires [Higher Mathematics or Physics](#) and Higher Application of Mathematics is not considered an alternative to Higher Mathematics.

The University of Dundee requires [National 5 Mathematics at grade B](#).

Engineering

Engineering requires algebra, calculus, and trigonometry, which is covered in-depth within Mathematics. Applications of Mathematics is not considered as an alternative.

Mathematics

Mathematics involves algebra, calculus, and trigonometry, which is covered in-depth within Mathematics. Applications of Mathematics is not considered as an alternative.

Medicine

[St Andrews University](#) and [Glasgow University](#) do not accept Applications of Mathematics in place of Mathematics, although the [University of Edinburgh](#) does. However, entry to Medicine is extremely competitive and anyone wishing to pursue medicine should consider taking Mathematics over Applications of Mathematics to maximise their chances.

Science

While there may be limited options within science where Applications of Mathematics is a suitable alternative— such as [BSc \(Hons\) Food Science, Nutrition and Wellbeing at the University of Abertay](#) — it is generally unlikely to meet the requirements for most science fields. Mathematical concepts such as calculus and algebra are essential in many areas of science, so Applications of Mathematics is generally not recommended as a substitute for Mathematics.

**Skills
Development
Scotland**

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SOURCES: Information from reliable online sources with confirmation and/or further detail sought via college and university admissions.

All information and links are correct at time of publication May 2025

To any report issues or make resource suggestions,
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