CAREER GUIDE 2025-26
Mathematics vs Applications of Mathematics

Skills Development Scotland

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.

Applications of Mathematics covers numeracy, finance, and data handling for everyday use.

Launched in 2021, just over 35,000 pupils worked towards a National 4, National 5 or Higher Applications of Mathematics qualifications in 2024 (SQA Statistics). It is recognised as a suitable alternative to Mathematics when applying to <u>most</u> work and study opportunities.

✓ **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	Journalism
Languages	Law
*Midwifery	Music
*Nursing	*Paramedic Science
Philosophy	*Physiotherapy
*Police	Politics
Social Work	*Teaching
Theatre	Tourism
Veterinary*	

*Further detail – when it **IS** likely to be suitable

ℹ Applications of Mathematics MAY be a suitable alternative to Mathematics

Accounting and Finance*	Architecture*
Armed Forces/Military*	Business*
Computing*	Dentistry*
Economics*	Electrical (Electrician) *
Joinery*	Medicine*
Plumbing*	Psychology*
Science*	Sports*

*Further detail – when it **MAY** be suitable

✖ Applications of Mathematics is NOT recommended as an alternative to Mathematics

Mathematics*	Engineering*

*Further detail – when it is **NOT** recommended

*Further Detail

✔ When Applications of Mathematics IS likely to be a suitable alternative to Mathematics But still check

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**

Veterinary
Applications of Mathematics is a suitable alternative to Mathematics for the following courses:
- **Scotland's Rural College (SRUC) BVSci Veterinary Science**
- **University of Edinburgh BVM&S Veterinary Medicine and Surgery**
- **University of Glasgow Veterinary Medicine & Surgery BVMS****
- **University of Glasgow Veterinary Biosciences BSc/MSci****

> **ⓘ** **When Applications of Mathematics MAY be a suitable alternative to Mathematics**
> **Double check**

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**

Dentistry

Dentistry is highly competitive, and anyone wishing to pursue it should thoroughly research requirements. Examples where Applications of Mathematics is a suitable alternative:

- **University of Glasgow Dentistry BDS** – Higher Mathematics/Applications of Mathematics or Physics is required**

Examples where Applications of Mathematics is not a suitable alternative:

- **University of Dundee Dentistry BDS** – National 5 Mathematics is required, and Applications of Mathematics is **not** accepted as an alternative**

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)

Examples where Applications of Mathematics is a suitable alternative:

- **Forth Valley College - Pre-Apprenticeship Electrical Installation**

Examples where Applications of Mathematics is not a suitable alternative:

- **West College Scotland - Pre-Apprenticeship Electrical Installation**
- **Glasgow Clyde College - Pre-Apprenticeship Electrical Installation**

Joinery

Examples where Applications of Mathematics is a suitable alternative:

- **Perth UHI – Construction (Carpentry and Joinery) NPA**
- **Forth Valley College NQ Carpentry & Joinery (Pre-Apprenticeship)****

Examples where Applications of Mathematics is not a suitable alternative:

- **Fife College - National Progression Awards Carpentry & Joinery** - National 4 Mathematics is required. National 4 Applications of Mathematics is not accepted as an alternative, but National 5 Applications of Mathematics is accepted as an alternative**

Medicine

Entry to Medicine is extremely competitive and anyone wishing to pursue medicine should investigate how choosing Mathematics or Applications of Mathematics impacts their options

Examples where Applications of Mathematics is a suitable alternative:

- **University of Edinburgh**

Examples where Applications of Mathematics is not a suitable alternative:

- **University of Aberdeen****
- **University of Dundee****
- **University of Glasgow****
- **University of St Andrews**

Plumbing

Examples where Applications of Mathematics is a suitable alternative:

- **Perth UHI – Pre-Apprenticeship Plumbing**
- **West College Scotland – Pre-Apprenticeship Plumbing with Renewable Technologies**
- **Forth Valley College – Pre-Apprenticeship in Plumbing****

Examples where Applications of Mathematics is not a suitable alternative:

- **Fife College - National Progression Award: Building Services: Plumbing and Electrical** – National 4 Mathematics is required. National 4 Applications of Mathematics is not accepted as an alternative, but National 5 Applications of Mathematics is accepted as an alternative**

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**

Science

Examples where Applications of Mathematics is a suitable alternative:

- **University of Edinburgh BSc (Hons) Biological Sciences**
- **University of Highlands and Islands HNC Applied Sciences**
- **BSc (Hons) Food Science, Nutrition and Wellbeing at the University of Abertay**

Examples where Applications of Mathematics is not a suitable alternative:

- **University of Edinburgh BSc (Hons) Physics**
- **University of Edinburgh BSc (Hons) Chemistry**

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**

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 Still check with institutions**

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.

Why Check?

Entry requirements may change, so individuals are encouraged to check with the relevant colleges or universities. This guide is for general information only and should not be used as a substitute for checking official university requirements.

As part of widening access efforts, some institutions may offer greater flexibility with entry requirements, so it may be worth contacting them directly for guidance.'