



INSTITUTE OF
**MATHEMATICS &
ITS APPLICATIONS**

Course Accreditation and Recognition

Course Provider Handbook



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Introduction

The Institute of Mathematics and its Applications (IMA) offers a Course Accreditation and Recognition (CAR) scheme that recognises university mathematical sciences degree courses whose graduates meet the educational requirements for membership of the IMA, or for membership and the Chartered Mathematician (CMath) designation.

CAR makes it easier for graduates to prove that they meet the educational standards required for membership of the IMA and for professional recognition. This helps them take their first steps towards becoming a Chartered Mathematician.

The CMath designation highlights individuals as professional mathematicians, placing their expertise and skills alongside other chartered professionals in various fields. Becoming CMath offers a range of benefits for students, universities, employers and the mathematics profession.

How Do Recognition and Accreditation Benefit Universities?

For universities, IMA CAR isn't just a badge of honour – it's a partnership. By recognising and/or accrediting your mathematics courses, you'll:

- **Connect with the IMA and share best practices:** Engagement with the process opens the door to dialogue between your institution and the IMA, helping you to stay informed about industry trends and educational standards.
- **Enhance your course reputation:** Recognition and accreditation tell prospective students and employers that your courses meet high professional standards, making your courses more appealing and respected.
- **Support your graduates' careers:** offering a recognised/accredited degree gives your students a clear route towards professional recognition, helping them stand out in the job market and progress in their careers.

How Do Recognition and Accreditation Benefit Students?

For students, enrolling in an IMA-recognised or accredited course is about more than just learning – it is about preparing for a successful career. Here's how it helps:

- **Expand your career options:** graduating from a recognised/accredited course makes it easier to achieve the CMath designation, which opens a wide range of career opportunities and provides a professional pathway for CPD.
- **Improve your employability and salary prospects:** professional qualifications like CMath boost your employment prospects and can lead to higher salaries compared to non-chartered peers.
- **Easily join the IMA as an Associate Member:** Graduating from a recognised course makes it easy to become an Associate Member of the IMA, giving you a headstart towards achieving full chartered status. IMA membership also opens the door to several other benefits: mentoring and career development support, access to events and conferences, journals and the IMA's membership magazine *Mathematics Today* to continue your learning.

Why Should Employers Hire Graduates from IMA-Recognised/Accredited Courses?

For employers, employing graduates from IMA-recognised/accredited courses comes with significant advantages:

- **Assurance of expertise and competence:** you can trust that they have met high educational standards and are well-prepared for professional roles.
- **Versatility in problem-solving:** Chartered mathematicians are trained to apply advanced mathematical techniques across different industries. Whether your organisation works in finance,



data science, engineering, or research, these graduates bring adaptable, high-level problem-solving skills to the table.

- **Easier access to qualified STEM graduates:** IMA recognition and accreditation ensure degrees meet professional standards aligned to employer needs, making it simple to identify well-prepared candidates, ready for the workplace.

How Do Recognition and Accreditation Strengthen the Mathematics Profession?

Ensuring high standards

Guarantees that graduates have met rigorous educational requirements, ensuring they're well-prepared for professional roles.



Nurturing the next generation of mathematicians

The IMA helps align educational outcomes with industry needs, supporting a strong pipeline of talent for STEM fields.

Building a strong professional community

Graduates become part of a broader network of chartered professionals, contributing to the advancement of mathematics in research and industry.

Recognising and accrediting degree courses helps strengthen the mathematics profession by:

- **Ensuring high standards:** Guarantees that graduates have met rigorous educational requirements, ensuring they're well-prepared for professional roles.
- **Nurturing the next generation of mathematicians:** The IMA helps align educational outcomes with industry needs, supporting a strong pipeline of talent for STEM fields.
- **Building a strong professional community:** Graduates become part of a broader network of chartered professionals, contributing to the advancement of mathematics in research and industry.

Overview

The following information is relevant to universities applying for CAR for the first time and those wishing to renew their existing CAR.

IMA recognition/accreditation is awarded based on the recommendations of an External Assessor and is provided at three levels:

- i) Recognition:** Recognised as meeting educational requirements for membership of the IMA (at AMIMA, MIMA or FIMA level, as appropriate to the individual). Typically applies to joint honours bachelor's degrees e.g. "mathematics and [other subject]".
- ii) Accredited by the IMA to meet the educational requirements for Chartered Mathematician (CMath), with further training and experience in employment:** Typically applies to bachelor's degrees (e.g., BSc), including joint honours with closely aligned disciplines, or some MA degrees, such as those from Scottish universities after four years of undergraduate study including a foundation year. For this level, further training and experience in employment is required to obtain competencies equivalent to those specified by the QAA for taught master's degrees.



iii) Accredited by the IMA to meet the educational requirements for Chartered Mathematician (CMath): Typically applies to integrated master's degrees (e.g., MMath).

To achieve IMA recognition/accreditation, courses must undergo assessment by an IMA External Assessor. This includes a visit - either online or in-person - to the institution, where representatives will meet with the Assessor to ensure quality assurance for the nominated course(s).

CAR is usually granted for five years. In exceptional circumstances, this can be extended to a maximum of six years. For new courses, interim CAR can be considered within the existing period.

Criteria

To be considered for CAR, a degree course must be an honours degree, normally consisting of:

- 360 credits for a bachelor's degree
- or**
- 480 credits for an integrated master's degree.

Degree courses should satisfy the relevant version of the Frameworks for [Higher Education Qualifications \(FHEQ\)](#) and be assured at institutional level against appropriate external reference points at the appropriate level (Bachelor, integrated Master), for example the current [QAA Benchmark for Mathematics, Statistics and Operational Research](#) at the appropriate level (Bachelor, integrated Master etc).

CAR is awarded to individual named degree courses.

Any course seeking CAR must be validated internally within the institution prior to application. It must also have been running for at least 12 months, with students currently enrolled on the course at the time of application. This requirement applies to both UK-based and overseas-delivered degree courses.

Placement years that form part of a degree course are not considered for the purposes of CAR decisions.

For degree courses that include a preliminary or foundation year, only the degree content from relevant later years will be considered in the CAR decision.

Bachelor's degrees should provide students with the subject-specific knowledge, understanding and skills, as well as the wider transferable skills and attributes that prepare graduates for a wide range of careers in many sectors.

(QAA MSOR Benchmark, 2023)

The CAR designations recognise the importance of integrating new and emerging areas of mathematical studies alongside traditional mathematical topics within a degree course. Particular mathematical topics are not prescribed but will inevitably include calculus and linear algebra and in most cases elements of probability and statistics. A mix of pure and applied mathematics, along with statistics and operational research, will form the typical range of topics of the mathematical content of a recognised/accredited course.

The use of mathematical and statistical software alongside the development of computer programming should add to the general IT skills that mathematical sciences graduates are expected to have.

Graduate Skills Requirements

The acquisition of graduate or professional skills is an important part of the assessment of a course for recognition/accreditation. Thus, the degree course should provide graduates with the opportunity to have developed transferable skills that will be of value in a wide range of situations, including

The ability to apply their skills in:



- Problem solving.
 - Professional communication.
 - Digital capabilities including information retrieval, programming, and the effective use of general IT facilities.
 - Working with others.
- Reflection, to support:
 - Planning self-learning and improving performance, as the foundation for lifelong learning/CPD.
 - Monitoring and adjusting a personal programme of work on an on-going basis.
- The ability to exercise initiative and personal responsibility, which may be as a team member or leader.

While generic skills-based modules are generally not considered as directly contributing to the 'mathematics content,' they may be assessed to provide a specified proportional contribution by the External Assessor or correspond to supporting mathematical competencies. Guidance on the inclusion of mathematical, educational, and professional skills content is also provided in Table 1.

Recognition Requirement for AMIMA/MIMA/FIMA

Bachelors or Masters undergraduate degrees must normally comprise a minimum of 50% of undergraduate level mathematics at each stage of the course. If any particular year of a course has less than this it can be compensated for in later years.

In addition to Recognition being applicable to single honours mathematical sciences degree courses, or courses in which mathematics is a 'major' component, for instance courses of the type 'mathematics with [other subject] ', Recognition is also typically applicable to joint honours mathematical sciences degree courses, for instance courses of the type 'mathematics and [other subject] ', where the other subject is not mathematically-based.

CMath Accreditation Requirement

Bachelors or integrated Masters undergraduate degrees need to contain a minimum of 66% of undergraduate level mathematics at each stage of the course. If any particular year has less than this it can be compensated for in later years.

For degree courses that include a preliminary or foundation year, only the degree content from relevant later years will be considered in the accreditation decision.

This level of accreditation is typically applicable to single honours mathematical sciences degree courses, or courses in which mathematics is a 'major' component, for instance courses of the type 'mathematics with [other subject] '. Some joint honours courses with closely aligned disciplines may meet the criteria for accreditation – the decision is taken by the External Assessor.

Employability skills can be developed through courses as part of the core mathematical studies, or through bespoke employability skills modules. The following table provides some examples of where employability skills could be applicable to a mathematical sciences curriculum:

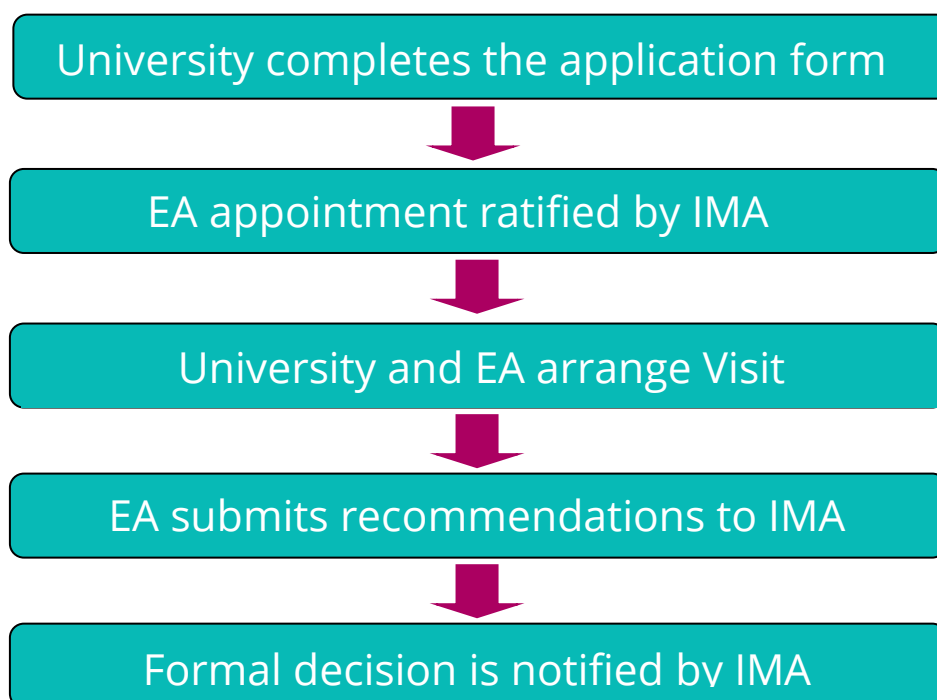


	Definition	Sample Activities	Desired Outcomes
Professional communication	• Ability to communicate effectively and appropriately through a variety of means, including oral presentations and communication to different audiences	• Briefing report • Project dissertation • Placement • Blog • Poster • Presentation	• An understanding of professional expectations • Ability to communicate in a clear, positive and impactful way to different audiences • How to structure and deliver relevant (technical) content • Effective delivery (e.g. use of visual aids, use of time)
Digital capabilities including information retrieval and the effective use of general IT facilities	• Information, data and media literacies • Digital learning and development • Digital creation, problem solving and innovation • Communication in a specialist mathematical sciences context	• Projects that involve the use of appropriate mathematical, statistical and presentation software • Using digital resources • Presenting and interacting over digital platforms • Coding & programming	• Understanding effective uses of digital technologies • Confident interact with others through digital platforms • Agility and willingness to use digital communications and technologies
Working with others	Working inclusively and effectively together to collectively achieve a common goal	• Group projects • Group reports • Seminars • Group presentations	• Understanding your impact and contribution within the team • Recognising the contributions of others • Achieving a common goal
Reflection	Consideration to develop enhanced understanding and insight in relation to professional outcomes and areas/opportunities for further enhancement	• Post activity reflection • Self-evaluation • Action planning	• Greater self-awareness • Willingness to receive and act upon feedback • To be a reflective practitioner for self-improvement

Table 1: Examples of where employability skills could be applicable to a mathematical sciences curriculum



Application process



Applications must include explicit listings of all versions of degrees to be considered.

The IMA CAR process is designed to build on the outcomes from the Institution's Course Validation, Monitoring and Review process, such as those set out by the QAA. Relevant Quality Assurance outcomes should be made available to the nominated IMA External Assessor - typically confirmation of internal validation / approval of each relevant degree course.

IMA CAR is generally granted for five years and may be advertised, at the appropriate level, within the relevant course literature and on the [Discover Uni](#) website. A further one-year extension can be requested if convenient to enable coincidence with an Institutional Review (note that an extra fee is applicable, pro rata, for this year).

Minor course changes, such as following an internal course review that results in a redesign of a group of modules, would normally only need reconsideration at the next Course Visit.

Recognition/Accreditation Process

To recommend IMA CAR, the External Assessor must ensure that the outcomes of the overall Quality Assurance (QA) processes and the internal validation/revalidation process are satisfactory. A key requirement for each nominated degree course is to confirm that all graduates meet the necessary mathematical content threshold.

CAR, typically valid for 5 years, requires a visit from an IMA-approved External Assessor to the university (which may be conducted online). The Assessor must verify that the mathematical content and skills align with the level of recognition or accreditation requested. Importantly, the Assessor must be confident that the appropriate level and relevant mathematical content are attained by all graduates of each nominated course.

For Interim CAR, which applies to new degree courses or continued recognition/accreditation due to significant revisions of existing courses, a visit may not be necessary. In such cases, applications will be evaluated by a nominated External Assessor, and if approved, recognition/accreditation will be granted until the next full IMA Course Recognition/Accreditation visit.



The following supporting information should be provided to the IMA External Assessor for each course being put forward for CAR at least 2 weeks in advance of the planned visit:

- Course specification document, including clear list of core and optional modules.
- Module descriptions for all maths modules, and any modules on the course outside maths but with a mathematical content.
- Assurance that the course has been through an institutional validation process.

All information should be valid for when the recognition/accreditation is to commence. It may be the case that if backdating is also requested, two sets of documentation are needed i.e. for the current and future courses.

Optional but useful:

- External Examiner Reports and any reports from other internal or external validation or review processes, where appropriate.

There is no requirement for any bespoke report to be written for the IMA CAR process.

After the visit, the External Assessor submits recommendations to the IMA within 6 weeks, providing a recommendation for each degree course nominated by the university for consideration. Assessors are asked to include feedback to the Department which will be relayed to the Department alongside the decision letter, and to consider identifying areas of good practice that could be shared more widely if the Department is happy to do so.

External Assessor

Universities seeking CAR must nominate an External Assessor who is acceptable to the IMA; the nominee **should normally be a Fellow of the IMA** and should have sufficient experience of the academic requirements associated with the CMath designation. External Academics who do not hold the CMath designation themselves will be asked to supply a brief copy of their CV.

A nominated External Assessor must be familiar with the sector-recognised standards for HE qualifications and be aware of the relevant standards applicable to the HEI they are assessing, as CAR is open to UK HEIs. A helpful reference is the [Office for Students' guidance on sector-recognised standards](#). They must also be familiar with the mathematics course content, such as that identified within the current QAA - Subject (MSOR) Benchmark. It is expected that an External Assessor has recent experience of working in Higher Education (normally within the past five years) and has relevant experience in programme management or quality assurance of a mathematics degree course such as serving as an undergraduate programme director, external examiner, or participating in internal programme reviews.

A current or previous Course External Examiner or Advisor (appointed by the Institution) is eligible to be nominated as an External Assessor to review degree courses for accreditation.

A formal date for the visit should be agreed with the External Assessor; for example, this may be conveniently associated alongside an Institutional Course Review/Degree Course Review / Course Examiners Meeting.

External Assessors will be issued with relevant information and guidelines and assigned an IMA CAR Mentor if reviewing degree courses for the first time.

The IMA can provide a Pre-Approved External Assessor list, containing details of IMA members who would be prepared to receive an invitation to be an External Assessor.

How to Apply / Renew CAR

Applications for CAR can be submitted for:



- i) Renewal of existing course recognition/accreditation.
- ii) Recognition/accreditation of an additional degree course (where there is currently accreditation of a similar course).
- iii) Recognition/accreditation of a degree course (where there is no current recognition/accreditation).

A CAR Check list is available to help Institutions through the process is available to download from the IMA website.

A CAR Application Form should be completed and submitted electronically to the IMA Education Team at education@ima.org.uk.

Please note the following when submitting your list of degree courses for recognition or accreditation:

The list you provide at the time of submission will be treated as your final and complete submission for the current review cycle.

No additional degree courses can be added after submission. The IMA does not accept late amendments. Any degree programmes not included in the original list will need to be submitted in a future review cycle.

We strongly advise you to review your course list carefully before submitting, to ensure that all relevant degree courses are included. The External Assessor will conduct their review only based on the courses provided in your submission.

Partnerships between UK and Overseas Universities

Degree courses delivered in a parallel (or equivalent) provision at an overseas University can be recognised/accredited provided graduating students attain the quality and standards equivalent to an existing recognised/accredited course and are awarded by the UK partner University.

This can mean a degree that is offered at the overseas partner university but is not offered at the UK university. However, the IMA will need to know which courses at the UK partner University the overseas University degree courses are equivalent to.

An application for CAR must come from the UK University in consultation with the overseas partner University, as it is the UK University who awards the degrees.

The Head of Department/Department Head of Education or equivalent at the UK University is required to confirm that students graduating from the overseas partner University attain the same quality and standards as on the degree courses awarded by the UK University.

Please note: Applications for recognition or accreditation of degree courses delivered by overseas partner institutions must be submitted at the same time as the UK University's own provision. These should be reviewed together as part of a single CAR submission.

Fees

The fee for recognition or accreditation is determined by the total number of full time equivalent (FTE) students enrolled across all years of each degree course submitted for review.

Up-to-date information on the current fee structure is available on the IMA website.

This is a modest fee designed to contribute towards the administrative costs of processing and managing applications. Note that External Assessors are volunteers and receive no payment for their work (the HEI must pay any reasonable travel expenses incurred for an in-person visit direct to the EA).



For UK institutions applying on behalf of an overseas partner university, the combined total number of students enrolled on all relevant courses, including those delivered in the UK and overseas, will be used to calculate the appropriate fee.

The fee is payable once the CAR review has been completed. It is charged per review and covers the entire period of recognition or accreditation granted by the IMA.

During this period, the university may approach the IMA with updates or minor changes to courses without incurring additional charges.

Universities should ensure that any correspondence relating to CAR is directed to the IMA's Education Team. Please ask your finance department to send all relevant communications to: education@ima.org.uk. This will help us process and manage CAR-related matters efficiently.

All summary reports are sent to the chair of IMA Higher Education Committee (HEC) (or other nominated person), for CAR to be granted.

A University may appeal against a recommendation of non-approval of a course to the chair of HEC when based on a submission of additional information to support the appeal. An Institution has three months after receiving the decision to submit their appeal.

Recognised or Accredited degree courses may be identified within university course literature and on the Discover Uni website according to the appropriate level and period.

If you have any additional questions concerning the scheme, please contact the IMA Education Team at education@ima.org.uk.

Associated Documents:

- IMA CAR Course Provider Handbook (this document)
- IMA CAR Application Form (UK)
- IMA CAR Application Form (UK partner HEI)
- IMA CAR Checklist
- IMA CAR Extension Request Form
- IMA CAR Change Notification Form