IOM3 Academic Accreditation Guide

Information for Higher Education Institutes (HEIs)

1   **Contents**

Institute of Materials, Minerals & Mining

2   General

2.1   INTRODUCTION

IOM3 is a professional engineering, environmental and scientific institution for individuals within the materials, minerals, and mining engineering disciplines. IOM3 supports and develops professionals from the early stages of their career, into retirement and beyond. Achieving professional registration is one way for members to develop in their career, by recognising individuals as a competent practitioner in their technical field and specialisation. IOM3 is licenced with the Engineering Council (EngC), The Science Council and The Society for the Environment, to provide professional registration.

This document has been produced to aid higher education institutions (HEIs) in the application for academic accreditation for engineering-related programmes and reference to EngC standards and regulations will be made throughout.

2.2   ENGINEERING COUNCIL

The EngC is the UK's regulatory body for the engineering profession. All licensees of the EngC are required to adhere to the Regulations for Registration (RfR) which cover two licenced activity areas:

 1) Accreditation

 2) Professional registration.

2.3   ACADEMIC ACCREDITATION

An accredited programme must meet with the requirements of the Accreditation of Higher Education Programmes (AHEP), the UK Standard for Professional Engineering Competence and Commitment (UKSPEC) and the Approval and Accreditation of Qualifications and Apprenticeships (AAQA) guides provided by the EngC.

From 2009 to 2021, programmes accredited from intake year 1999 onwards were deemed to automatically have 'dual accreditation 'for IEng and CEng and be eligible for recognition under the Sydney Accord[1].

In 2021, automatic dual accreditation of all honours degrees was revoked, in order to protect the international standing of CEng accredited UK honours degrees. The new

---

[1] https://www.ieagreements.org/accords/sydney/

policy is in effect for all accreditations from the 2022/23 academic year. HEIs will continue to be able to apply for both IEng and CEng accreditation for their honours degrees. IOM3 will need to verify that the programme delivers both partial CEng and full IEng sets of learning outcomes and will therefore require the AHEP module mapping matrices for both full IEng and partial CEng learning outcomes. All of the standards being applied for will need to be specified on the application form for each programme.

IOM3 can accredit HEI degrees to the Incorporated Engineer (IEng) and Chartered Engineer (CEng) standards. Peer reviewers assess the structure, content, and delivery to the AHEP4 standard.

AHEP4 has 18 learning outcomes (LOs) covering 5 key areas of learning:

1. Science and mathematics

2. Engineering analysis

3. Design and innovation

4. The Engineer and society

5. Engineering practice

These 5 key areas instil the foundation of theories, knowledge, and skills applicable for the diverse engineering-based disciplines and will vary according to the aims of the individual programme. An accredited degree is expected to be informed by current professional industrial practice.

Joint visits

IOM3 is happy to accredit on joint visits. For ease, IOM3 permits applications made on the lead Professional Engineering Institute (PEI) application forms. IOM3 can also undertake accreditation visits with the EAB (run by the EngC). Please be aware that EAB visits are currently under review and may not continue in the current format.

3   Accreditation Experts

The IOM3 Accreditation Experts (AE) are engineers from industry or academia and are expected to actively hold MIMMM or FIMMM and CEng. AE conduct the peer review. To ensure AE are equipped with the necessary knowledge and understanding of accreditation, they are required to attend a training session before going on their first visit and retrained every 3 years. The training covers the EngC standards and regulations, and IOM3 procedures and requirements. AE are provided with a Terms of Reference. AE are also trained in data protection every 2 years either from mandatory employee training or as IOM3 additional training.

Each accreditation visit will typically have a minimum of 1 academic AE and 1 industrial AE, along with an IOM3 team representative, normally the Accreditation Manager. This is the accreditation panel.

4   Accreditation and Professional Formation Committee (APFC)

APFC is a governance Committee of IOM3, reporting to the Professional Standards and Development Board. Its members are a select number of AE, with a variety of specialisations in the academic or industrial field. The role of APFC is to oversee all areas of accreditation, specifically the approval of panel recommendations for accreditation and their findings, programme and requirement extensions requests, and any appropriate topics for discussion and action. The Committee normally meets three times per year.

5   Accreditation Procedure

Academic accreditations with IOM3 go through an eight-stage procedure.

5.1   STAGE 1: INITIAL CONTACT

Contact with IOM3 can be made through the contacts button on the website
https://www.iom3.org/careers-learning/accreditation-and-approval/accreditation.html

or by contacting the Accreditation Manager via phone or email. IOM3 aims to reply to initial enquiries within 4 working days. It is likely the initial application form will be included in the response email.

Name	Number	Email
Accreditation Manager Tori Richardson	01476 515760	tori.richardson@iom3.org
General Enquiries		accreditation@iom3.org

5.2   STAGE 2: INITIAL APPLICATION FORM

HEIs seeking accreditation are asked to fill out the initial application form and send it back to IOM3 at least six months prior to the requested visit date. IOM3 will assess the available dates for accreditation. It is advisable to offer a few suggested dates suitable for the department. All initial visits are held over two working days in person. Alternate reaccreditations can be made virtually via Microsoft Teams, assuming no significant changes to the programme have been made. The timetable for the in person visit and virtual visit cover the same meeting requirements.

IOM3 advises that each accreditation application has 1 to 3 designated contacts that we can liaise with. These individuals are likely to be the staff co-ordinating the submission.

Care should be taken with the list of programmes table, with particular attention to each programme registration category. The registration category depends on the level of learning which is explained in the table overleaf.

Institute of Materials, Minerals & Mining

Programme Registration Category Table

	Registration Category	
	IEng	**CEng**
Foundation degree	IEng (requires further learning)	N/A
Undergraduate degree	IEng (full)	CEng (requires further learning)
Integrated Masters (e.g., MEng)	N/A	CEng (full)
Postgraduate study (excluding integrated Masters), e.g., MSc, MRes, EngD	N/A	CEng (is further learning)

If dual accreditation is desired for an undergraduate degree, please note the two registration categories in the form.

5.3   STAGE 3: FULL SUBMISSION

The full submission will be provided via a Microsoft Teams channel. This needs to be completed eight weeks prior the visit date.

The aims of the programme need to fulfil the AHEP learning outcomes, and this will need to be evidenced through mapping which demonstrates the intellectual level of the programme. Programmes need to demonstrate a balance between technical and non-technical content. There needs to be evidence of industrial influence and involvement demonstrating links with external stakeholders.

As a professional body, IOM3 actively promote a culture of equity, diversity, and inclusion (EDI). All accredited courses are expected to also demonstrate these values.

The full submission involves ten different sections plus a checklist. Overleaf are the requirements that IOM3 is looking for in each section. When filling in the application document, please be as detailed as possible.

Section 1: General Information

1.1 General Details

This section is the same as the initial application form. This is to include any changes that have been made since the initial application form was submitted.

1.2 Programme Details

- Use the title that appears on the degree certificates, including any variations e.g. 'with a year in industry'.
- Please list all programmes you wish to be considered for accreditation.
- Please use the EngC database reference number. If the course is new, please indicate 'NEW'.
- If you are looking for recognition of an apprenticeship, including an apprenticeship degree, or graduate apprenticeship such programmes may be accredited in line with the AAQA, or the degree may be accredited against AHEP.
- Please indicate years for which accreditation is sought – from intake month and year to intake month and year, e.g. Sept 20XX to Aug 20XX. Accreditation is for a maximum of five years – plus any back dating. Note backdating of accreditation can only be considered in exceptional circumstances and panel members must be able to review work from all cohorts for which backdating is sought.
- Please indicate the registration category against which accreditation is sought e.g. CEng, or IEng:

    Foundation degrees can be accredited as partially meeting the underpinning knowledge and understanding requirement for IEng.

    o Bachelors top-up degrees can be accredited as further learning for IEng.
    o Bachelors degrees can be accredited as meeting in full the underpinning knowledge and understanding for IEng.
    o Bachelors (Hons) degrees can be accredited as meeting in full the underpinning knowledge and understanding for IEng or partially meeting the underpinning knowledge and understanding requirement for CEng.

- o Integrated Masters (e.g. MEng) degrees can be accredited as meeting in full the underpinning knowledge and understanding required for CEng.
- o Masters degrees other than Integrated Masters and Doctorates can be accredited as further learning for CEng.

Section 2: Previous Accreditation

For those going through reaccreditation it would benefit the panel to detail the responses to the previous accreditation requirements and recommendations, and any changes made since the last visit. If this section does not apply, due to it being a new accreditation, please put "N/A – NEW".

Section 3: Quality Assurance and Graduate Information

3.1 External Examination and 3.2 External Review

These are important sections providing evidence of your own moderation of your programmes. To confirm your programmes meet the AHEP standard, please submit the previous three years' external examiner reports for each programme in the relevant folder and name the external examiners in the form. IOM3 AE like to see consistent communication with external examiners. Please include three years' responses to the external examiners' reports. Further external moderation evidence can also be submitted, such as the QAA report.

3.3 Internal Review

When looking at internal moderation, the panel like to see detailed procedures on internal reviews and the programme changes policy. Please provide this policy in the relevant folder.

Student integrity is more important than ever with the continual advancements within the industrial revolution 4.0, e.g., artificial intelligence. The application form requires submission of any student integrity policies and a short statement from the Academic Integrity Officer detailing how the university ensures appropriate academic conduct is made clear to students and that students follow policy rules.

3.4 Graduate Destinations Data

Please provide the most recent institution level graduate destination data – DLHE (Destination of Leavers of Higher Education) six month or longitudinal data and/or internal statistics. This should capture graduate destinations, whether graduates work in graduate roles and starting salaries.

Section 4: Staff

Submit all members of staff associated with the programme/s put forward for accreditation. Provide details of the development polices for all staff; please detail how these are implemented and information on the staff appraisal scheme. Specify the training available and how this is funded. Include induction training for new staff. Please also state how professional registration with a Professional Engineering Institution (PEI) is encouraged. Comment on the diversity and inclusion culture and practice prevalent within the academic unit.

Section 5: Resources

5.1 Facilities

Provide information on departmental resources especially teaching laboratories, library facilities, and study areas. Include student access hours. This ensures the panel is satisfied the appropriate and adequate resources are provided for all students. If there have been any changes since the previous visit, please detail these in this section.

5.2 Student Experience

If this programme admits students with a wide range of evidenced ability levels and/or admits students directly into later years of the programme, provide details of how these students are supported.

5.3 Future Plans

Please outline any known future plans within the next 5 academic years expected to have an impact on the resources available to support the programmes.

Section 6: Registration and PEI membership

Any HEI seeking the reaccreditation or new accreditation of a course or courses through IOM3 will be required to have at least four (4) members of the respective teaching faculty involved in the taught delivery of the courses in paid-up membership of IOM3 at either the FIMMM or MIMMM grade and undertake to maintain this level throughout the period of any proposed accreditation. Three (3) of those four members must be professionally registered as CEng through IOM3 and undertake to maintain this level throughout the period of any proposed accreditation.

Exceptions to this rule, unless specified in an accreditation report, are:

i) **Where IOM3 accredits three (3) or fewer courses in total at the respective university faculty,** at least two (2) members of the respective teaching faculty involved in the taught delivery of the courses in question will be required to be in paid-up membership of IOM3 at either the FIMMM or MIMMM grade and undertake to maintain this level throughout the period of any proposed accreditation. In addition, at least one (1) member of the respective teaching faculty involved in the taught delivery of the courses in question will be required to be professionally registered as a CEng through IOM3 and undertake to maintain this level throughout the period of any proposed accreditation.

ii) **When the course(s) concerned are joint honours, for example physics with materials science,** at least two (2) members of the respective teaching faculty involved in the taught delivery of the course(s) will be required to be in paid-up membership of IOM3 at either the FIMMM or MIMMM grade and undertake to maintain this level throughout the period of any proposed accreditation.

iii) **When the course(s) concerned are not an IOM3 core subject, for example, textiles or environmental engineering or chemistry,** at least two (2) members of the respective teaching faculty involved in the taught delivery of the course(s) will be required to be in paid-up membership of IOM3 at either the FIMMM or MIMMM grade and undertake to maintain this level throughout the period of any proposed accreditation.

Please read the additional document for further information.

Section 7: Industrial relevance and input including outreach activities.

Industrial input in programmes is of importance to ensure students graduate with the knowledge, theories, and skills to match what companies are looking for in future engineers.

7.1 Industrial Relevance

Provide details of the industrial and research inputs to the programme review and development process.

7.2 Industrial Advisory Board

Where the Department has an Industrial Advisory Board (IAB) or equivalent, describe the various ways in which the IAB contributes to the support and development of the programmes put forward for accreditation. Please provide details of the membership of IAB, their names, terms of reference, information on the frequency of meetings. Please include minutes of the IAB meetings for the last three years.

7.3 Outreach Activities

Please detail the outreach activities undertaken in the topics covered by the programmes, including by volunteers and by staff paid to do this work.
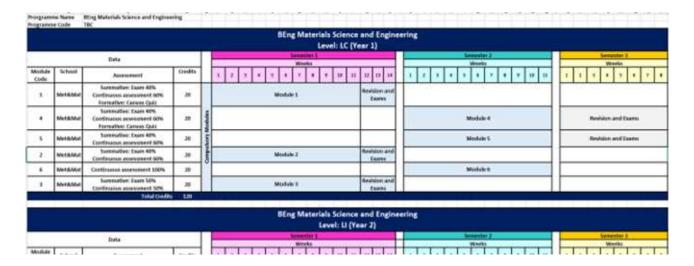
Section 8: Programme Details

8.1 Programme Details

These should be repeated for each programme seeking accreditation. You may incorporate similar programme and levels together, please mention this at the top of the section. These sections will detail all the specific information of each programme, including AHEP mapping, any overseas or off campus arrangement, admissions, projects (group and individual with how the projects and groups are allocated), regulations, retention, and any further data. It is important to be as specific and detailed as possible here to ensure panels have a full picture of each programme.

8.2 Programme Structure and Assessment

Please provide a diagram of the programme structure with accompanying notes if needed. An example diagram is provided overleaf and a template is provided in the accreditation application documentation.

AHEP Learning Outcomes

Engineering programmes must demonstrate through teaching and assessment methods that graduates have reached the desired threshold level of each of the Output Criteria as specified by the UK-SPEC document AHEP. An up-to-date copy of this document can be found in the guides file on the Teams channel.

A separate AHEP mapping document should be completed for each programme. List the programme modules for all years of the programme and indicate against each module which output criteria statements the module makes a major contribution to for all students who pass the module. Please note that a learning outcome (LO) must be indicated against a module where *all* students completing that module are assessed against the LO described. If a module may deliver an LO for some students (often the case for projects) this is not acceptable within the AHEP mapping.

Methods of assessment sheet

This document compliments the AHEP mapping as it shows how the wide variety of assessment methods student are measured on and how each assessment ensures all students meet the claimed AHEP LOs.

Coursework

Where a piece of coursework is significant (i.e. relates to 30% or more of the total marks available for a module or it is the only element instrumental in meeting AHEP LOs in a module) please provide:

    i)   A copy of the coursework brief and exemplar solution where appropriate.

ii)   A minimum of six sample course work assignments (or the whole cohort if less than six), including three at the lowest scoring pass with student names removed as necessary.

iii)   A copy of the marking/feedback sheets for each of the assignments provided.

iv)   A copy of the coursework marks in that module for the whole cohort.

Examinations

Where an examination is significant (i.e. relates to 30% or more of the total marks available for a module or it is the only element instrumental in meeting AHEP LOs in a module) please provide:

i)   A copy of the exam paper and exemplar solutions

ii)   A minimum of six sample exam scripts (or for the whole cohort if less than six), including the three lowest scoring pass with student names removed as necessary.

iii)   A copy of the exam marks for the whole cohort.

IOM3 has produced a remote online examinations statement recommending that for accreditation, examinations should be back on campus. Please read the additional guidance for the statement, see Section 7.

Summary of Any Changes to Delivery and Assessment

Summary of changes to delivery and assessment of LOs since full submission (e.g. in response to Covid or industrial action) and for current year compared to year for which data/student work is submitted. Where applicable please provide:

i)   Updated output matrices

ii)   Updated programme structure information

iii)   Updated syllabuses/module descriptors

iv)   Updates to project information including any changes to assessment and/or marking criteria.

v)   Updates to methods of assessment (where changes have been made for each module, please confirm how much is assessed by written examination, end of unit tests, programme assignments and practical work, major project, other (e.g. placements, also please confirm any changes to provision for compensation, referral procedures and opportunities to re-sit examinations).

vi)	Updates to conditions governing progressions and/or transfer on undergraduate programmes (from year one to another for each programme, from one programme to another e.g. between BEng (Hons) and MEng)
vii)	Summary statement on changes in response to Covid or other unforeseen circumstances.

Student work

Providing student work is at the EngC regulation requirement that is essential for all accreditations. Please provide at least 3 examples of student work for each module, from the previous three academic years, covering low, medium, and high marks. If backdating is requested, student work examples will also need to be provided for each academic intake. It is important to show suitable marking and that the work has been through moderation. IOM3 advises providing blank marking schemes and any other information that will support the panel in reviewing these documents. To ensure data protection, please make sure the examples are not labelled with student names.

8.3 Overseas or Off-Campus Study

Please provide details of any period spent overseas or off campus - include length of time, other organisations involved, how external methods of study are judged compatible with the home organisation, how the period is assessed and if credits from this time count towards the final degree.

8.4 Partnership Arrangements

If applicable, indicate the Institution where any programme is franchised, and the proportion of the programme studied at that Institution. Please provide procedures by the School/Department to ensure that the franchise arrangements are reviewed.

8.5 Admissions

Describe the admissions requirements for the programme and provide information on admissions for the past three years.

Section 9: Projects

Please provide a list of individual projects and group projects for students. Titles and marks should be provided for the most recent year available.

Please state the process for selection and allocation of projects. Please list how projects are assessed, including any marking criteria. Please state the implications for a student who fails a project. Include, where available, the Student Project Handbook., including a copy of the policy on re-submission of project work.

Please indicate if there are any confidentiality agreements in place which would have an impact on the availability of project reports for review by accreditation panel members. If a confidentiality agreement is in place, please could you confirm that a waiver has been requested or whether arrangements have been put in place for panel members to sign a waiver agreement? Any requests for panel members to sign a waiver or confidentiality request must be made well in advance of the visit.

Section 10: Regulations, Retention and Final Results

Please provide copies of relevant regulations/records to demonstrate your compliance with the EngC rules on compensation and condonement, which have been in place since the 2022/23 intake year.

The Engineering Council Condonement and Compensation Policy states:

> *'In the consideration of the accreditation of undergraduate and postgraduate engineering degree programmes:*
>
> *1. Evidence that all Accreditation of Higher Education Programmes (AHEP) learning outcomes are met by all variants of each programme must be provided before accreditation can be granted.*
>
> *2. No condonement of modules delivering AHEP learning outcomes is allowed.*
>
> *3. A maximum of 30 credits in a Bachelors or integrated Masters degree programme can be compensated, and a maximum of 20 credits in a Masters degree other than the integrated Masters degree.*
>
> *4. Major individual and group-based project modules must not be compensated.*
>
> *5. The minimum module mark for which compensation is allowed is no more than ten percentage points below the nominal module pass mark (or equivalent if a grade-based marking scheme is used).'*

Please read the additional guidance for further information, see Section 7.

5.4 STAGE 4: STUDENT SURVEY

A survey is forwarded to all students on the programme/s put forward for accreditation 1 week prior to the visit. This will be sent to the main contact to distribute to the students.

5.5 STAGE 5: THE VISIT

The visit is a 2-day timetabled event. A draft timetable will be sent for the HEI to edit according to the needs of the programmes. The first and last meeting should be the same on all visits. IOM3 is happy to approve any reasonable timetable changes outside of these meetings. The first meeting introduces the panel to key staff and allows departmental information to be shared. The last meeting is the debrief session where the recommendation for accreditation, accreditation period, and the visit findings (requirements, recommendations, and commendations) will be verbally presented.

5.6 STAGE 6: VISIT REPORT

A report is written by the IOM3 team representative no later than 4 working days after the visit. The report will be forwarded to the panel for review, with 10 working days to make any comments. The report is then forwarded to the accreditation contact/s with 10 working days to make any factual comments (i.e., within 24 working days of the end of the visit). If no response to given at the end of those working days, IOM3 will accept the report as factually correct, and no comments need to be made.

5.7 STAGE 7: APFC AND DECISION LETTER

Once the visit report has been agreed, APFC has 10 working days to provide its response to the recommendation for accreditation, accreditation period, and the visit findings. APFC must either approve or reject these. An overall majority is required for an outcome. The decision letter will be issued once an outcome has been made. It is at this point an invoice is raised with the IOM3 Accounts Team for immediate payment.

If APFC rejects the report or does not have a majority, the department will be notified via email that the report will be up for discussion at the subsequent APFC meeting. Please be aware APFC only meets 3 times per year and so it could be some time before the final outcome decision is made. IOM3 will issue the Committee's final response in a decision letter with the reason for approval or rejection of accreditation.

5.8   STAGE 8: THE QUAD

After payment has been made and any immediate requirements been met, the EngC will be updated via the QUAD (the EngC accreditation database).

Note: IOM3 accreditation is a flexible process and does not pass judgment on each programme. It is looking to ensure each programme is at the level suitable for accreditation with the Engineering Council. All requirements and recommendations are there to improve the hard work already put into the programme/s.

6 Grounds for Appeal

All organisations who have recently been unsuccessful in achieving EngC accreditation have the right to a fact-based appeal if:

- The application and visit information provided does not correspond with the visit report findings (requirements and/or recommendations only).
- The panel (assessors) did not have adequate ability to peer review the programme/s.
- The accreditation process was prejudiced from personal opinions.

Appeals should be emailed to IOM3 within 4 weeks of the report being approved by APFC. IOM3 has six months to provide an unbiased written response.

7 Additional guidance

Additional guidance can be found on the IOM3 website via the following link:

https://www.iom3.org/careers-learning/accreditation-and-approval/accreditation.html

Details of routes to membership with IOM3, including professional accreditation can be found at:

https://www.iom3.org/membership/become-a-member/types-of-membership.html

8   Abbreviations Table

Abbreviation	Meaning
AE	Accreditation Experts
AHEP	The Accreditation of Higher Education Programmes
CEng	Chartered Engineer
EDI	Equity, Diversity, and Inclusion
EngC	Engineering Council
GDPR	General Data Protection Regulation
HEI	Higher Education Institute
IAB	Industrial Advisory Board
IOM3	Institute of Materials, Minerals and Mining
IPD	Initial Professional Development
LOs	Learning outcomes
PEI	Professional Engineering Institute
RfR	Regulations for Registration
RQF	Regulated Qualifications Framework
SCQF	Scottish Credit and Qualifications Framework
UKSPEC	The UK Standard for Professional Engineering Competence and Commitment