IBMS Institute of Biomedical Science Education

Guidance and Criteria for the Re-accreditation of BSc (Hons) Degrees in Biomedical Science

For cohort intakes from September 2026

This document explains the Institute of Biomedical Science (IBMS) requirements for re- accreditation of undergraduate (BSc (Hons)) degree programmes in Biomedical Science. Separate documents are available for initial accreditation of full undergraduate (BSc bachelor level) honours degrees, and initial accreditation / re-accreditation of postgraduate degrees. The Institute does not accredit Higher National Certificates / Diplomas, A-Levels or Scottish Highers qualifications or any parts of university programmes.

IBMS Accredited programmes are required to nominate a university liaison, who is the main point of contact between the university and the Institute; this would ordinarily be a member of academic staff with responsibility for leading the programme. If this person changes during the accreditation period, the Institute must be informed.

IBMS accreditation is normally granted for a named programme(s) for a period of five years (five successive intakes of first-year students), during which time the programme can be advertised using the IBMS Accredited logo. At the end of this period, the programme is eligible for re-accreditation, provided it can be demonstrated that the accreditation criteria continue to be met.

For further information about re-accreditation, please contact the Education Office (education@ibms.org).

Annual Monitoring
The education provider is required to undertake annual monitoring exercise and provide relevant information requested by the IBMS within the timeframe specified. From time to time, the IBMS may request additional/other information to be provided by an accredited institution, these requests will be kept to a minimum and all information will be treated as confidential. Full details of the annual monitoring process together with a link to an online form are emailed to the university IBMS liaison officer at the end of the academic year. Failure to complete the annual monitoring will be reported to the Education & Professional Standards Committee.

Failure of the education provider to maintain their compliance with the criteria for accreditation and conditions for ongoing accreditation will trigger a review by the IBMS that could result in the accreditation status of the programme(s) being withdrawn.

Changes Made to the Programme after Re-accreditation
It is a condition of accreditation that the education provider must notify the IBMS Education Office of any proposed programme changes that are related to the criteria for accreditation described in this document. For example, changes that might affect the delivery and learning outcomes of the programme, course title, new pathway, different assessment types, overall aims or changes to academic teaching staff. A clear rationale for the changes must be provided on the change notification form. Proposed changes must ensure the programme continues to meet IBMS accreditation criteria and be approved by the Institute following submission of relevant supporting documentation.

Extensive changes to any programme may trigger an earlier re-accreditation event. If significant institutional changes to programme structure or assessment strategies are imposed on a programme team, the Institute must be notified, and a way forward will be agreed.

A change form is available on the IBMS website or by request from education@ibms.org and must be completed <u>before</u> the changes are introduced.

Re-accreditation
During the final year of student admission in the current accreditation period, the education provider will be notified that re-accreditation documentation will need to be submitted for review. This can be regarded as an opportunity for periodic review and quality enhancement of the programme.

A database of accredited programmes is held by the IBMS and updated as contact details or accreditation status changes. The list of accredited programmes is also published on the IBMS website.

The re-accreditation process is based on the following process:
1. Electronic submission of documents by the programme team for review by an IBMS-appointed panel.
2. An in-person or online re-accreditation visit (Face-to-face re-accreditation events will be usually be completed for those programmes offering sandwich or integrated placements and apprenticeships) comprised of a series of meetings with representatives from each stakeholder group. Stakeholder meetings required:
   a. Programme delivery team
   b. Current students from similar BSc programmes (from each year group)
   c. Employers who have been involved in the design of the programme.
3. Determination of re-accreditation outcome by the IBMS panel, including post-event follow-up to address any re-accreditation conditions.

These guidance and criteria will apply equally to UK and non-UK education providers applying for re-accreditation of existing BSc (Hons) programmes for the next intake of students in September 2026.

Re-Accreditation of BSc Hons Programmes Outside of the UK
Education providers outside of the UK are required to agree the date for the re-accreditation event <u>a minimum of six months before the event</u> and provide final confirmation of travel, entry visa and hotel arrangements no less than one month before the re-accreditation visit.

The education provider is responsible for the booking and payment of hotel accommodation outside of the UK and return flights as per the guidance provided by the IBMS at the point of application for re-accreditation.

For further information about IBMS re-accreditation, please contact education@ibms.org

Table of Contents

INTRODUCTION

The Institute of Biomedical Science (henceforth referred to as IBMS) is the professional body for biomedical scientists and has been accrediting biomedical science degree programmes since the 1970s.

IBMS accreditation is a process of peer review, quality assurance and enhancement that ensures professional standards of education and training are met by graduates of accredited biomedical science programmes, such that they are suitable for employment in the biomedical science sector. Successful completion of an IBMS accredited BSc (Hons) Biomedical Science, Healthcare Science PTP programme, or level 6 degree apprenticeship (mapped to Biomedical Scientist degree apprenticeship standard), plus completion of the IBMS Registration Training Portfolio allows graduates from these programmes to seek registration with the Health and Care Professions Council (HCPC) to work under the protected title of Biomedical Scientist in the UK.

The rationale for seeking IBMS accreditation is for a single academic institution to gain recognition as the provider of a full BSc Biomedical Science honours level programme that meets the QAA Subject Benchmark Statement for Biomedical Science and Biomedical Sciences (2023) curriculum **and** HCPC Standards of Education and Training requirements for statutory regulation of biomedical scientists in the UK.

The IBMS is approved by the HCPC as an education provider for four routes to registration as a biomedical scientist. These routes are:

1. **Route 1. Certificate of Competence (accredited degree containing the Registration Training Portfolio)**
   Full-time or part-time degrees with mandatory placement(s) in a pathology laboratory that has IBMS approval for pre-registration training. The placement is an integral part of the degree, and the education provider is responsible for ensuring arrangements are in place to enable completion of the IBMS Registration Training Portfolio during the degree. The degree award must enable students to be eligible for the award of the IBMS Certificate of Competence <u>upon graduation</u>, thereby evidencing that graduates are eligible to apply to the HCPC for registration as a biomedical scientist.

2. **Route 2. Certificate of Competence (accredited degree followed by the Registration Training Portfolio)**
   This route includes:
   - Full-time or part-time degree without placement opportunities.
   - Full-time or part-time degree with an <u>optional</u> placement* in an IBMS- approved training laboratory or alternatively, students may take a placement year in a research or industrial laboratory. Completion of the IBMS Registration Training Portfolio (which must be in an IBMS-approved training laboratory) is optional and not a requirement for the degree award.

   This model may take different forms. Where an education provider offers a programme with placement(s) this could be in an IBMS-approved laboratory or other situations where

professional work experience can be gained. In these degrees the placement period is still recognised as part of the degree programme and therefore stays within the university's responsibility for student welfare and arrangements for the placement.

3. **Certificate of Competence (Non-accredited degree followed by the Registration Training Portfolio)**
   Route 3 is for graduates with a partially relevant science degree or a non-IBMS accredited biomedical sciences degree and provides a route of academic equivalence to the accredited degree. Individuals with these degrees are likely to require supplementary study of specified modules from an IBMS accredited BSc (Hons) degree to meet the equivalent of an IBMS Accredited biomedical science degree and the academic content required in the QAA Subject Benchmark Statement and the HCPC standards of education and training.

4. **The Certificate of Competence by Equivalence (Biomedical Scientist)**
   The equivalence route is for experienced practitioners already working in the field of biomedical science and at a level commensurate with a biomedical scientist, for whom registration with the HCPC is desirable.

The HCPC approved routes to registration 1 and 2 are facilitated via IBMS accredited BSc (Hons) Biomedical Science programmes. Route 3 is facilitated by the completion of top-up modules provided from an IBMS Accredited BSc (Hons) programme, following graduation from non-IBMS accredited BSc programmes.

The types of BSc (Hons) degree programmes covered by IBMS degree accreditation (and / or direct HCPC approval) are summarised in the table on the next page:

	BSc (Hons) Biomedical Science	BSc (Hons) Biomedical Science (with placement)	BSc (Hons) Applied Biomedical Science or Level 6 Degree Apprenticeship
Study mode	Full or part-time, (usually three years full time, or five or six years part-time) in England, Wales and Northern Ireland. Four years full time in Scotland and in international undergraduate programmes. (Part time routes can be six to eight years)	Usually full time, 3-year degree programme with a sandwich year (4 years total) in England, Wales and Northern Ireland. Four years full time in Scotland including a placement that may be delivered across more than one year of study.	Variable depending on the provider, consisting of a degree programme with integrated completion of the IBMS Registration Training Portfolio
Placement provision	No year-long sandwich placement (short work experience or internships may be offered)	Optional placement year in an IBMS approved training laboratory where the Registration Training Portfolio is completed, or an industry or study abroad placement year	Mandatory integrated clinical placement in an IBMS approved training laboratory and completion the Registration Training Portfolio
	All IBMS Accredited BSc Programmes		
Curriculum content	All BSc degree programmes seeking IBMS accreditation must be mapped to the QAA Subject Benchmark Statement for Biomedical Science (2023) The clinical specialisms (clinical biochemistry, medical microbiology, clinical immunology, cellular pathology, haematology and transfusion science and clinical genetics) should be covered across FHEQ level 5 and 6 (or SCQF level 9 and 10). Any student undertaking a placement year should cover an appropriate level of underpinning theoretical knowledge in all clinical specialisms **prior** to starting their placement.		

Core and optional content	All BSc degree programmes that are IBMS accredited must cover both the basic knowledge and clinical specialisms detailed in the QAA Subject Benchmark Statement for Biomedical Science (2023) Optional modules can be incorporated into programmes (normally within FHEQ level 5 and 6 or SCQF level 9 or 10). All clinical specialisms must be covered in core modules and any optional modules included must not create a route through the programme where a clinical specialism is missed.

All IBMS Accredited BSc Programmes			
Employer Liaison Group	All BSc degree programmes that are IBMS accredited must have an active Employer Liaison Group (ELG) that ensures registered biomedical scientists can input into the design and delivery of the programme. ELG is not just required for those programmes that have a placement route.		
	BSc (Hons) Biomedical Science	**BSc (Hons) Biomedical Science (with placement)**	**BSc (Hons) Applied Biomedical Science or Level 6 Degree Apprenticeship**
IBMS Registration Training portfolio	N/A	The education provider must ensure arrangements are in place to enable completion of the IBMS Registration Training Portfolio during the degree. Upon programme completion, graduates will be eligible for the award of the IBMS Certificate of Competence and thus be able to apply to the HCPC for registration as a biomedical scientist. (For industrial (or non-clinical/non-NHS) placements due diligence must be evidenced in sourcing and monitoring placement provision).	
HCPC Approval	The IBMS is an HCPC approved education provider, therefore IBMS accreditation of these BSc (hons) programmes will allow students to subsequently register with the HCPC if they are awarded the IBMS Certificate of Competence following		These degrees may be directly approved by the HCPC in addition to IBMS accreditation.

	successful completion of the IBMS Registration Training Portfolio (either after graduation or during a sandwich placement). Direct HCPC approval of the programme is not required.	HCPC approval is gained by a similar process of programme review against the HCPC standards of education and training (SETS) and Standards of Proficiency (SoPs).

The IBMS accreditation criteria are informed by the HCPC standards of education and training (SETs) and the Quality Assurance Agency (QAA) Subject Benchmark Statement for Biomedical Science and Biomedical Sciences (2023). This document can be found here: https://www.qaa.ac.uk/the-quality-code/subject-benchmark-statements/subject-benchmark-statement-biomedical-science-and-biomedical-sciences

The degree award title should reflect that the programme content has been mapped closely to the QAA Subject Benchmark Statement 2023 for Biomedical Science. The IBMS requires the use of BSc (Hons) in Biomedical Science (singular) in the award title for our accredited degrees to denote their profession-specific nature.

Additional IBMS Accredited BSc programme Information:

- The curriculum must specifically address the investigation of disease processes in the diagnosis and management of patients. Integration of these subjects will develop a student's professional, evidence-based approach to the causes, diagnosis and treatment of disease. This is normally evidenced by a pathobiology or biology of disease module in FHEQ level 6 or SCQF level 9 or 10.

- All IBMS accredited BSc programmes are required to submit an annual monitoring report to the Institute that includes self-reflection on areas including student performance, external examiner reports and their responses, and graduate outcomes every academic year. The report will be requested by the IBMS education department and must be completed by the date specified.

- After initial IBMS accreditation, re-accreditation occurs every five-years, unless a major change triggers an early re-accreditation event. Re-accreditation is an opportunity to critically review and evaluate the programme and ensure it continues to meet the current IBMS criteria for BSc degree accreditation.

- After initial IBMS accreditation (and after each re-accreditation event for the programme(s)), changes to the programme and modules will not be considered by the Institute **for a period of 24 months**. The only exception to this will be if the university imposes institutional wide policies which require a change to the accredited programme(s) organisation (e.g. modular structure).

- The programme team may wish to apply to the Institute to become a "top-up" module provider for graduates from non-IBMS accredited programmes. Unless a full degree programme is recommended in their non-accredited degree assessment outcome, the top-up students will not be studying a full course, or for a degree award.

- **Please Note:** Top-up modules offered by an education provider must be those which form part of an accredited BSc (Hons) programme. The organisation and delivery of practical skills and closed book assessments must be clearly articulated if this differs in top-up modules compared with the existing BSc (Hons) Biomedical Science module. All top-up modules must continue to meet the IBMS accreditation criteria for closed

  book assessments (on campus invigilated assessments or invigilated assessments in the workplace, using colleagues trained by the university).

- Undergraduate degrees with enhanced research in the final year, e.g. MSci will be considered for accreditation against the criteria for undergraduate degrees. The required taught curriculum will usually be covered in the first three years of the programme, giving the opportunity for more flexibility in the topics covered in the final year.

- There is no restriction on students entering year two (or three of a four-year degree) in accordance with university regulations for recognition of prior learning. The programme team will determine whether a direct-entry applicant has the same subject knowledge as internally progressing students, prior to admission. It is expected that appropriate mapping of direct entrants is undertaken by the programme team as part of the entry/admissions process.

SECTION 1: PROGRAMME RE-ACCREDITATION PROCESS

Re-accreditation is facilitated through the IBMS Education Office and all communication should be addressed to education@ibms.org unless otherwise specified.

Re-accreditation will be conducted following electronic submission of all required documentation. This documentation will be reviewed by an IBMS panel (including the IBMS Education Lead, an academic representative and an HCPC-registered professional representative), followed by an on-site on online visit, for meetings with the programme delivery team, students (from each level of study) and employers.

The IBMS panel members will scrutinise the accreditation documentation prior to the visit and identify themes for discussion during the relevant meeting(s).

Programmes will be re-accredited for the next intake of students (usually in September of the year in which the event takes place, or the following September). Re-accreditation is normally awarded for a period of five years (five consecutive intakes of students). Accreditation and re- accreditation are not awarded retrospectively.

Formal certification of IBMS accredited status will only be confirmed when all conditions set by the panel are responded to appropriately, approved and ratified by the IBMS Education and Professional Standards Committee.

Programme teams should ensure that the timing of their re-accreditation event will enable these processes to be completed before the relevant intake of students commence their studies; the usual timeframe from initial application to ratification of IBMS accredited status is six months, but this is dependent upon panel availability and education providers are urged to liaise with the IBMS to agree dates.

In accordance with Competition and Markets Authority (CMA) guidelines, programme teams should inform students who have applied to the programme and received an offer that the programme is scheduled for an IBMS re-accreditation event. Until the proposed programme has been reviewed and the conditions set by the IBMS accreditation panel are met, the academic content, module structure, assessment types and practical class content may change. It is therefore vital that applicants are advised as described in the CMA guidance for higher education providers:

"If you anticipate that there may be changes to the content and delivery of the courses described in this information, including the possible withdrawal of courses, it is important that you make prospective students aware of the likelihood of, and scope for, such changes"
https://assets.publishing.service.gov.uk/media/6475b2f95f7bb7000c7fa14a/Consumer_la w_advice_for_higher_education_providers_.pdf

There are three stages to the reaccreditation process.

Stage: 1 - Pre-event
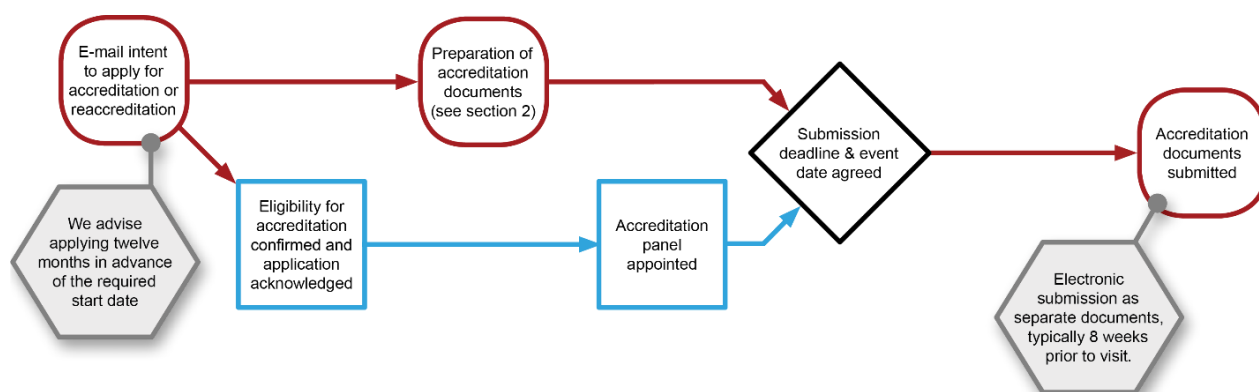
1.1 Once a re-accreditation application has been acknowledged, the IBMS will appoint a panel and the university will be notified. Dates for submission of documentation will then be agreed. The panel will comprise:

One IBMS Education lead, one academic representative (from an IBMS accredited Officer) and one professional representative (HCPC registered biomedical scientist). The panel will work together to ensure that all required aspects of the accreditation criteria for the programme(s) have been addressed, including curriculum content, organisation and management of the programme, resourcing for the programme, assessment strategies and effectiveness of quality assurance processes. The panel will scrutinize the academic content of the programme, its adherence to sector norms, mapping to the relevant subject benchmark statement, plus evaluating the teaching, learning and assessment practices, quality assurance and responses to feedback from stakeholders. The panel will also determine if the arrangements for placement provision are appropriate; that practitioners have opportunities to contribute to the design and delivery of all programmes (even those without placements), and that there is an active and regular employer liaison group.

1.2 Education providers applying for IBMS re-accreditation of BSc degree programmes (and accreditation of additional new award titles to add to existing programmes) are expected to provide all documentation described in Section 2 of this document. All documents submitted must use the IBMS templates provided. These templates include a "self-reflection" document that contains detailed evaluation of the programme(s) during the last accreditation period and any proposed changes to the programme for the next accreditation period.

1.3 All files submitted should be provided in word or pdf format and the filename must be short and clearly identify the content. Pages must be numbered in all documents and the content of each document listed in a contents page or by using sub-headings.
Groups of supporting documents should be collated into sub-folders and named clearly.

1.4 All re-accreditation documentation must be submitted electronically to the IBMS by the agreed date, which is usually eight weeks before the scheduled re-accreditation event.

1.5   Following document receipt, the Education Office will confirm if the documentation is complete and sufficient to allow appropriate scrutiny. Any missing documentation will be requested prior to the re-accreditation event being arranged and must be provided in sufficient time for the panel to review in advance.

1.6   The final agenda for the re-accreditation event must be agreed with the Institute's Education Lead at least one week prior to the accreditation event. The proposed agenda (including named individuals that will meet the panel from each stakeholder group) must be emailed to education@ibms.org.

1.7   Each meeting at the re-accreditation event must be chaired by an independent Chair appointed by the education provider (usually Head of a different School). It is the responsibility of the education provider to ensure secretarial support for the Chair and Panel. Minutes of meetings must record the main points of discussion throughout the event. The final version of the minutes will be agreed after the event and include the final wording of any conditions etc. set by the panel.

Stage: 2 – The re-accreditation event
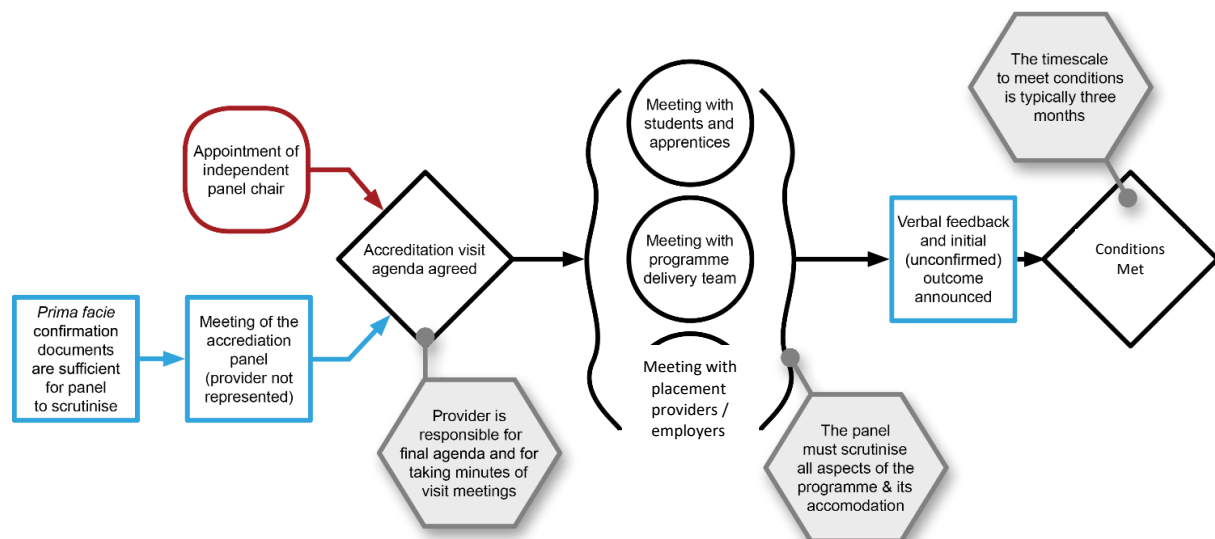
A proposed agenda for the re-accreditation event is shown on the next page. The order of the sessions with students and employers can be switched, if different times are more convenient for these stakeholder groups to attend.

If meetings are held virtually, they are usually held via Zoom or MS Teams. Separate sessions for the IBMS Panel to meet each group should be arranged by the education provider.

The agenda for the re-accreditation visit will include:

	Meeting	Purpose	Suggested duration
1	Private meeting of the IBMS panel with the independent Panel Chair and secretarial support (provided by the HEI).	Panel introductions and theme setting for the event.	15 min
2	A tour of the teaching and research laboratory facilities.	Allow the panel to contextualise the documentation into the teaching spaces if the university has not had a face-to-face event before.	Usually 45 min
3	Meeting with the programme team	This should include a presentation by the programme leaders about the programme(s) being considered. If the event is online an overview of the laboratory facilities should be included (max 15 min). All key subject-specific staff and part-time/visiting lecturers will be present to discuss details of their input into the programme and departmental research activities.	60 min
	Break (10 min)		
4	Meeting with representative students from the programmes under consideration	To understand the student experience and clarify aspects of the programme documentation from the student perspective.	45 min
	Lunch break (30-45 minutes)		
5	Meeting with employers (usually members of the Employer Liaison Group) and placement providers	This meeting will explore employer and practitioner input to the delivery and future development of the programme(s). If placements are offered, this meeting must also include training representatives from each placement provider.	30 min
6	If required, a final meeting of the Panel with programme team to clarify other issues.	As required	30 min
7	Private meeting of the IBMS Panel.	Consolidation of information, agree outcome and draft wording.	30 min
8	Verbal feedback report of outcomes to university staff.	Dissemination and summary.	15 min

1.8   At the end of the re-accreditation event, the Education Lead for the IBMS panel will provide verbal feedback and indicate the outcome of the visit.

1.9   The minutes produced by the education provider for the event should be checked internally, then sent to education@ibms.org within 2 weeks of the event for all IBMS panel members to approve.

1.10   The IBMS Education Lead will confirm the final wording of the minutes and outcome of the re-accreditation event with the IBMS panel members. The final report will then be emailed to the programme team, including the formal outcome of the event and wording of any conditions, recommendations and commendations, as appropriate. The date required for completion of actions by the programme team will be suggested during the accreditation visit and agreed in the final minutes.

Stage 3 - Outcome of the event

Outcome 1. Accreditation without conditions

The education provider has successfully demonstrated it meets all criteria for re- accreditation.

The Panel may make recommendations that provide an opportunity to refine or improve the education provider's approach to meeting the IBMS accreditation criteria. A response to recommendations is not required for accreditation but it is expected that the programme team will consider them for potential action points. Responses to recommendations should be reflected in subsequent re-accreditation visit documentation.

The Panel may also wish to give commendations for examples of good practice.

The IBMS Education Lead will provide a summary report of outcomes and a copy of the full re-accreditation report to the IBMS Education and Professional Standards Committee (E&PSC) for approval.

Following IBMS Education and Professional Standards Committee approval, the education provider is formally notified that the programme(s) has been re-accredited and the IBMS accreditation certificate awarded.

If E&PSC has any concerns these will be discussed with the Education Lead who was lead for the accreditation panel and the Executive Head of Education. The Programme Leader will be contacted through the Education Office and invited to respond to the concerns.

Outcome 2. Accreditation with conditions

The education provider has demonstrated that it meets most of the criteria for accreditation, but the panel have identified areas where the criteria are not met.

Any conditions set by the IBMS panel will be cross-referenced to the relevant accreditation criteria to clarify what must be met. A deadline for addressing all conditions will be identified and agreed (usually three months).

The IBMS Panel may make recommendations that provide an opportunity to refine or improve the education provider's approach to meeting the IBMS accreditation criteria. A response to recommendations is not required for re-accreditation but it is expected that the programme team will consider them for potential action points. Responses to recommendations should be reflected in subsequent re-accreditation visit documentation.

The IBMS Panel may also wish to give commendations for examples of good practice.

The education provider will be required to respond to the conditions by the set date. The IBMS Response to Conditions template must be completed that contains the responses to conditions, plus any supporting documentation required. The response to conditions document plus any supporting documentation must be submitted, with updated documentation clearly highlighting the changes required (using track changes or different colour font).

The documentation submitted in response to conditions for re-accreditation will be reviewed by the IBMS accreditation panel to confirm if the conditions have been adequately met or whether further action is required.

The Education Lead will provide a summary report of outcomes and a copy of the full re-accreditation report to the IBMS Education and Professional Standards Committee (E&PSC) for approval.

Following IBMS E&PSC approval, the education provider is formally notified that the programme has been re-accredited and the accreditation certificate awarded.

If E&PSC raises concerns about the report, these will be discussed with the Education Lead for the accreditation panel and the Executive Head of Education. The Programme Leader will be contacted by the Education Office and invited to respond to the concerns. If necessary, a further condition for accreditation and time limit for achieving this might be applied.

Outcome 3. Accreditation declined

In exceptional circumstances the IBMS panel may decide that the education provider has failed to demonstrate that it meets the majority of criteria for accreditation. In addition, from the discussions at the event the panel has concluded that the education provider has not been able to give sufficient assurance that if conditions were to be set, they could be met in advance of the next academic year.

The IBMS panel will identify which accreditation criteria have not been met and summarise these at the end of the event. The panel will not set any conditions or make any recommendations or commendations for programmes that are declined.

A full copy of the agreed re-accreditation event minutes that details the reasons for the panel decision to decline the accreditation will be provided to the education provider.

Following an unsuccessful re-accreditation event, the Institute will consider updated accreditation documentation within the same academic year. A second accreditation event will incur the full fee and the timescale for the new event will be agreed between the education provider and the Education Office upon application.

Alternatively, the education provider may withdraw from the IBMS accreditation process. This will not prejudice future applications by the education provider for accreditation of the programme.

If the IBMS E&PSC raises concerns about the re-accreditation being declined these will be discussed with the Education Lead for the accreditation panel and the Executive Head of Education.

Following IBMS Education and Professional Standards Committee consideration:

1.12   The education provider will be notified in writing that their programme(s) have achieved IBMS Accredited status following satisfactory responses to conditions set and formal ratification at the IBMS E&PSC.

1.13   IBMS Accredited programmes will be advertised on the Institute's website and the education provider will receive an accreditation certificate for the period of re-accreditation and permission to use the Institute's Accredited University logo. Only programmes that have current accreditation will be advertised on the Institute's website. The education provider will be expected to complete annual monitoring reports when requested by the IBMS.

1.14   Failure of the education provider to maintain compliance with the criteria for IBMS accreditation will trigger a review by the Institute that may result in withdrawal of the accreditation status of the programme or programmes.

1.15   Following a period of initial accreditation all programmes are normally reviewed on a five-year cycle of re-accreditation. Education providers will be contacted by the IBMS at the beginning of the final academic year of their accreditation period to discuss arrangements for re-accreditation.

Right of Appeal

Once the education provider has been formally notified of the outcome of the re-accreditation event, they have the right of appeal within one month of the event. The grounds for appeal are if the education provider feels that the accreditation criteria have not been applied fairly, or it is felt the accreditation panel has overlooked evidence that the IBMS accreditation criteria have been met.

Appeals should be put in writing to the IBMS Education Department stating the reasons for the appeal and sent to education@ibms.org

Appeals will be reviewed by the Executive Head of Education, or a different IBMS Education Lead for the Panel (if required), Chair of the IBMS Education and Professional Standards Committee and the Committee's academic representative.

SECTION 2: DOCUMENTATION REQUIRED FOR RE-ACCREDITATION

Documentation submitted for the IBMS panel to review must specifically demonstrate compliance with the IBMS accreditation requirements. To assist the IBMS panel scrutiny, submitted documents must be directly relevant to the programme, provide evidence that specifically addresses the accreditation criteria and is easy to navigate.

Self-Reflection Document

For programmes seeking re-accreditation, the IBMS programme "BSc self-reflection document" template must be completed (available on the IBMS web page under the "Accredited Degrees" tab and Resources for Course Leaders).

Within the self-reflection document, the academic team will complete an executive summary about the programme(s) being re-accredited. This summary will outline key information on how any changes introduced at the last accreditation / re-accreditation event have been received, how the programme has been running in its current format, plus any key changes being requested at the next re-accreditation event. The IBMS self-reflection document template contains a series of sections and subsections to allow detailed reflection on how the programme has been resourced, staff development, relevant academic staff expertise, student attainment and retention, responses to feedback from key stakeholders and action plans that underpin robust quality assurance processes.

For all programmes that offer placements, further sections will be completed that describe how the quality of the placements are ensured and how the programme team audit placement providers, define clear roles and responsibilities and effectively prepare all student before, during and after placement.

To support the IBMS self-reflection document, further supplementary documentation is required for each programme seeking IBMS re-accreditation. These documents are:

- Programme Specification
- Programme Handbook
- Student Handbook (if different to the programme handbook)
- Mapping of programme content to the QAA subject benchmark statement for Biomedical Science and Biomedical Sciences (2023) (using the IBMS template)
- Mapping of assessments to module (or programme) learning outcomes
- Assessment timetables for each level of study to indicate the type of assessment and week it is delivered (using the IBMS template)
- Evidence that closed book assessments take place throughout the programme (note that online un-invigilated or proctored assessments do not meet IBMS accreditation criteria).
- Mapping of the technical / practical skills and transferable skills developed during the programme (using the IBMS template)
- Module specifications (including **up to date** reading lists and resources list, e.g. textbooks within the past five years, journals or published guidance)
- Research Project Handbook (including indicative project titles, arrangements for student selection and allocation of titles)

- Placement Handbook (if required)
- Apprentices Handbook (if required)
- Documentation to evidence current IBMS laboratory training approval status for partner clinical laboratories and evidence of relevant training experience for training officers.
- Relevant quality assurance documentation for the programme(s) being delivered (annual National Student Survey (NSS) data, or equivalent for international education providers, staff student liaison committee minutes, annual monitoring reports and external examiner reports) and associated responses or action plans for the duration of the previous accreditation period.
- A description of how employers and HCPC registered biomedical scientists have been involved in curriculum design and will contribute to ongoing delivery of the programme, as evidenced by minutes of Employer Liaison Group meetings and actions plans / logs.
- Detailed staffing plan for programme delivery (to include the academic team, technical staff and visiting lecturers).
- Staff development opportunities and support for both academic staff and visiting lecturers.
- CVs of all academic staff and practitioners who will contribute to delivery of the taught content (using the IBMS staff CV template)

Supplementary Documentation (to be provided in Appendices):

The documents listed below will support the self-reflection document submitted by the academic team for scrutiny by the IBMS panel. Appendix 3 of this document provides a summary of how the supplementary documents will help to evidence that the programme meets the IBMS accreditation criteria:

Programme specification

The programme specification acts as a definitive record of the course, setting out the aims and learning outcomes, and how they are met. This acts as a reference point for the delivery, assessment, monitoring and review of the programme and should be designed to be shared with academic and support staff, students, internal and external examiners, professional and statutory bodies, and academic reviewers.

The programme specification is expected to contain clear information on the admissions process and entry requirements for the programme. It should clearly specify the English language requirements for admission to the programme. Any university policies for credit transfer APL or RPL, selection procedures and equal opportunities / widening participation should be referenced.

The programme specification should include the named award (BSc (hons) Biomedical Science (singular)) and all exit awards. The exit awards and fallback awards should **not** be called Biomedical Science.

Programme Handbook / Student Handbook

This document will be distinct from the programme specification and will serve as the main reference document for students.

The Handbook must include the following information: Programme title, duration, attendance pattern and all named award titles; course aims and learning outcomes; rationale for the design of

the programme. There should be a summary table or diagram of the compulsory modules and optional modules in the programme, clearly showing each level of study and routes through the programme(s). There should also be a summary table that shows how the programme learning outcomes map to each module.

The Handbook must also contain adequate information regarding relevant university regulations and policies, programme content, placement opportunities (if applicable), pastoral care arrangements, student support mechanisms, student representation system, career opportunities and the role of professional and regulatory bodies. Information about the remit of the IBMS (www.ibms.org) and registration with the HCPC (www.hcpc-uk.org) must be clear and accurate, with appropriate differentiation between the roles and responsibilities of these organisations and links to their websites.

It must be made clear to students if they are completing a degree that confers eligibility to register with the HCPC as a biomedical scientist that they are familiar with and abide by the updated HCPC Standards of Conduct, Performance and Ethics and the IBMS Good Professional Practice in Biomedical Science. Particular care should be taken to ensure that students understand the key changes in the HCPC Standards of Conduct, Performance and Ethics that include appropriate use of social media, equality diversity and inclusion; communication; duty of candour; upskilling; training responsibilities and managing existing health conditions and disabilities in the workplace.

More information can be found here:
https://www.hcpc-uk.org/standards/standards-of-conduct-performance-and-ethics/revised-standards/
https://www.ibms.org/resources/documents/good-professional-practice-in-biomedical- science/

A summary of the timelines and selection process for placement opportunities must be included in the Handbook (where applicable). The Handbook must demonstrate that students are provided with sufficient information to make informed choices about taking a placement, briefly explain the process of placement selection and allocation, changing to a different degree award title and associated pre-placement activities including inoculations, completing a basic DBS check and any placement provider visits. Any additional costs to the student associated with taking a placement year must be clearly articulated.

The Handbook must include details of assessment strategies used in the programme and rationale for these; Assessment Board arrangements; details of penalties for late submission of coursework; and approaches to preventing academic misconduct and plagiarism. There should be clear information provided to students on the institutional policies and guidance on the use of generative AI (e.g. ChatGPT) in modules and assessments. It must be clear to students what is permitted and considered appropriate use of AI in formative work and what is not permitted in summative assessments. Any penalties associated with inappropriate use of AI must also be clearly stated. The number of attempts that students have at all assessments within the programme must be clearly articulated, information on condonement and compensation of credits and the arrangements for transfer to any fallback award or exit award must also be clearly explained.

Module Descriptors and Assessment

The module descriptors should outline the balance of lectures, practical classes, tutorials and flexible or online learning. Summaries of the taught content for each module should be provided. Information on the level of the module, the number of credits and a description of each assessment component must be included. The contents of each individual module must have sufficient detail to indicate the depth and breadth of its contents, indicative reading and an assessment strategy that reliably assesses the taught content. The module learning outcomes and / or programme learning outcomes associated with the module must be listed and be appropriate to the academic level. Reading lists and other resources for each module must be included and be current and appropriate.

Closed book assessments must be evidenced across the duration of the programme to meet criterion 3.5. Closed book assessments in this context across the programme are not limited to formal written examination papers. The assessment strategy can and should encompass a variety of assessment types that have an element of "unseen-ness" to demonstrate the individual student's knowledge and understanding in real time. To demonstrate higher level skills, invigilated assessments should be utilized that include data analysis and interpretation, solving case studies, evaluation of clinical or published data, synthesis of new ideas and / or discussion of complex scientific information. Students can be asked to give oral presentations, viva voces, or defend a written piece of work including posters, PowerPoint presentations, or their research project report. This can also be achieved in practical and technical skill assessments using laboratory-based competency tests, objective structured practical exams (OSPE) or direct observation of practice (DOP) for a variety of scenarios, where the student's skills are observed in real time.

Please note: For modules that include the clinical specialisms (as listed in the QAA subject benchmark statement), it must be clearly stated that all assessment components must be passed at 40%, not just achievement of a pass mark for the module overall. For example, if the clinical specialism module has a coursework assessment and examination, both must be passed at 40%, rather than a mark of 35% and 65% resulting in an overall pass mark.

Please note: Condonement and / or compensation is not permitted for any module(s) where the learning outcome(s) cannot be met elsewhere in the programme

Please note: Practical skill development should be clearly articulated and there must be evidence of competency-based assessments of those skills throughout the programme.

Please note: The research project module must be double the weighting of other modules in the programme (for example if most modules are 20 credits, the Research Project module should be 40 credits, or if most modules are 15 credits, the Research Project module should be 30 credits).

If the university has a 30 credit module framework where all modules in the programme are 30 credits, it is expected that the research project will be 30 credits but that the programme team will clearly articulate where research skills are developed elsewhere in the programme. The research project must be passed and cannot be condoned or compensated.

Research Project Handbook
The Research Project Handbook should include full details of the research project organisation and support available (e.g., supporting lecture programme; practical skill development; amount of

supervision available, scheduling of supervisor meetings etc.). The range of project titles issued previously should be described, with some example titles provided and the arrangements for project allocation; data collection period for students; information on the production/structure of the dissertation; descriptions and explanations of all assessment

components, including marking schemes and if applicable funding arrangements; the organisation of any research projects (completed with external supervisors), plus the support for students, equitability of data collection periods and responsibilities of external work-based supervisors should all be clearly explained.

Placement Handbook (required for all sandwich placements and integrated placements) Detailed information must be documented in a Placement Handbook with specific information regarding the responsibilities of students, placement providers and the education provider. Information must include preparation for placements, any associated costs to the student for the placement, support during the placement and expected outcomes. This must be provided for any year-long placement taken during the degree, not just for clinical placements.

Where the IBMS Registration Training Portfolio is completed (or partially completed) as part of a placement in an IBMS approved training laboratory, details of responsibilities for training, assessment and the verification of the portfolio must be included. For integrated programmes, the student may be partially verified at the end of their placement, in circumstances where the final year curriculum and / or research project will be used to provide evidence for Section 2 Module 1 and / or Module 5 of the Registration Training Portfolio. Following a partial verification, a HCPC registered member of the academic team will confirm that the additional pieces of evidence produced in the final year of study are appropriate and demonstrate the remaining HCPC Standards of Proficiency. Once the final pieces of evidence have been verified and signed off, the completed Registration Training Portfolio can be submitted to the Institute, along with confirmation of the integrated students who have completed the degree programme successfully and require their IBMS Certificate of Competence to be issued.

For integrated placements where completion of the IBMS Registration Training Portfolio is integral to the degree award, the placement handbook must contain sufficient information to demonstrate the responsibilities of the education provider and workplace laboratory to ensure the quality of the training. The external verification of the IBMS Registration Training Portfolio must be conducted in accordance with IBMS Guidance and Procedures (available on the IBMS website). In addition, the education provider must provide the following documentation for integrated placements:

- A list of all IBMS approved training laboratories they use / are expecting to use for placement, with evidence that the partner laboratories have current IBMS pre- registration training approval in place.
- Evidence that there are structured laboratory training plans for placement students.
- Evidence that the training officers have relevant experience and expertise to train placement students evidence of ongoing relationships with the placement providers and clarification of the methods to evaluate placement provision, before, during and after the placement.
- Evidence of ongoing and regular "Training for Trainers" events with colleagues from

placement laboratories to ensure that the information discussed on the IBMS Registration Training Portfolio and evidence generation is current.

Apprentices Handbook (required for level 6 apprenticeship programmes)

The Apprentices Handbook should clearly explain which Level 6 degree apprenticeship standard the programme is aligned to. The attendance pattern and delivery model for the modules in the programme should also be clearly articulated. Academic and pastoral support for the apprentices both in the workplace and during their studies should also be included.

For all apprenticeship programmes, completion of the IBMS Registration Training Portfolio is integral to the degree award. This means that the Apprentices Handbook must contain specific information on the responsibilities of the education provider and workplace laboratory to ensure the quality of the taught content delivery, workplace training, off the job training, completion of the research project in the workplace and the verification of the IBMS Registration Training Portfolio. In addition, the education provider must provide:

- A list of all IBMS approved training laboratories they partner with to train apprentices.
- Evidence that the partner laboratories have current IBMS pre-registration training approval in place
- Evidence that there are structured laboratory training plans for all apprentices to complete the IBMS Registration Training Portfolio and that their 20% off the job training time is protected.
- Evidence that the training officers / workplace mentors have relevant experience and expertise to train apprentices
- A summary of the attendance pattern or description of distance learning arrangements for the apprenticeship
- Mapping of the Level 6 apprenticeship standard knowledge skills and behaviours (KSBs) to the modules
- Mapping of the HCPC Standards of Proficiency to the modules in the apprenticeship
- evidence of the preparation of both the apprentice and workplace mentor to deliver appropriate workplace-based research projects
- evidence of processes for external verifier training, laboratory audits and quality assurance of training and portfolio verifications.

Completion of the digital IBMS Registration Training Portfolio

The education provider acts as the liaison between the placement laboratory and IBMS to secure access to the digital portfolio platform for any of their placement students / apprentices completing the IBMS Registration Training portfolio during their placement. Documentation should show that clear channels of communication exist, and all parties are aware of their roles and responsibilities in ensuring relevant students have access to the digital portfolio. Applications for the portfolio and arrangements for payment should be managed directly between the education provider and IBMS Education Office.

Staff Student Liaison Committee (or equivalent) Meeting Minutes

There must be evidence of regular staff student liaison committee (or equivalent) meetings for the most similar programme(s) already being delivered. These meetings will provide opportunities for

all student cohorts (including part time students and apprentices) to provide feedback to the academic team on their pastoral support, taught modules, practical classes and overall student experience. The minutes should capture the discussion between student representatives and academic colleagues and contain clear actions that are reported on at the next meeting. It should be clear how the feedback loop to the rest of the students on the programme is closed and how they are informed of the actions of the academic team to address the issues or concerns raised.

If apprentices, distance learners or part time students cannot attend these meetings, then it must be clearly articulated how their feedback is brought to the meeting to be considered.

NSS Data and Action Plans
The annual National Student Survey (NSS) data for the BSc programme(s) must be included as supplementary documentation for the previous five years. The main themes from each set of NSS data (or equivalent for international education providers) should be presented in institutional NSS action plans (if these are normally produced by the programme team), or as part of programme annual monitoring reports or programme enhancement plans. Action plans to address any areas of concern should be clearly highlighted, along with areas of good practice to be disseminated.

If the BSc (Hons) degree is from a non-UK provider, evidence of student feedback on the modules and each year of study should be provided and an action plan for how any issues or concerns have been addressed for the previous five-year period.

Programme Level Annual Monitoring Reports
The institutional (university) annual monitoring reports for the most similar BSc programme(s) must be included as supplementary documentation for the previous five years. The main themes identified following analysis and evaluation of each set of data for the programme should be discussed. Action plans to address any areas of concern should be clearly highlighted, along with areas of good practice to be disseminated outside the programme.

External Examiner Reports and Responses
The External Examiner is involved in the quality assurance processes for a programme throughout the annual cycle, usually for a three- or four-year term of office. During the academic year the External Examiner is sent the draft of the Examination papers to review. They are asked to review the examination questions to confirm that they match the learning outcomes of the module and are appropriate for the level (i.e. year) of study. They give feedback and suggest rewording of the questions used in assessments to ensure a progression of learning standards throughout the programme. The examiner also has an independent view on the questions and can perhaps see where a question could be interpreted several ways and may suggest rewording to ensure clarity.

Please note - At least one external examiner for the programme(s) must be actively involved in the delivery of an IBMS accredited degree programme elsewhere in the UK (or other country for international provision). This is required so that the external examiner is able to ensure:-

- the standards set for the University's awards and a programme's constituent courses are appropriate by reference to the QAA Subject Benchmark Statement the National Qualifications Frameworks, the relevant Programme Specification and, where appropriate,

the requirements of relevant Professional and Statutory Bodies;

- the level of the module content and assessment types are appropriate for an undergraduate programme and show the development of higher level skills as the students progress;
- the standards of student performance in a programme and its constituent courses are appropriate and comparable with those of other IBMS accredited programmes;
- the processes for assessment, examination and the determination of awards are sound and have been conducted fairly in accordance with university regulations.

All external examiner reports for the most similar programme(s) being delivered must be included as supplementary documentation for the previous five years. The main themes identified following analysis and evaluation of each external examiner report should be discussed. Responses to the external examiners that include action plans to address any areas of concern should be provided, along with areas of good practice that have been highlighted.

Employer Liaison Group (ELG) Meeting Minutes (with indicative membership)
Please note - All IBMS accredited undergraduate programmes must demonstrate that there is satisfactory liaison with local employers including registered biomedical scientists through an active ELG, regardless of whether the programme contains a placement.

The Employer Liaison Group (ELG) provides a formal mechanism for the views of employers and HCPC registered biomedical scientists to be taken into consideration in the design and delivery of the programme. In the context of university/employer liaison employers are seen as professional advisors who are experienced practitioners or industry colleagues capable of having input to the development and improvement of courses by advising on subject-specific areas for theoretical knowledge and current / relevant practical skills that underpin the professional training in pathology disciplines. As not all students seek employment in pathology laboratories, input from employers working in other biomedical science sectors is also desirable, and essential where placement opportunities are being offered. Some of the external members of the Employer Liaison Group may have a teaching role on the course on a part time or visiting basis.

The role of the ELG can apply to single of multiple programmes accredited by the IBMS. There should be clear Terms of Reference for the Employer Liaison Group and agenda items that cover the clinical specialism modules in the programme, placements, (apprentices if appropriate), employability and currency of taught content and practical skill development. Minutes of the meetings should reflect the following roles of the ELG for each programme:

- offer expert advice to the Programme Leader and academic team on the content and relevance of the degree to professional practice in clinical pathology laboratories
- ensure that the delivery and structure of the programmes takes into account the support required from the laboratory (e.g. teaching the clinical specialisms and / or placements,)
- contribute to the ongoing and periodic review of degree programmes in line with service requirements and professional/regulatory standards
- contribute to the delivery of the clinical specialism modules to ensure that they are current and fit for purpose
- advise on new opportunities in biomedical science education that could enhance education

and training in biomedical science
- inform the education provider of changing needs relating to service delivery and employment as a biomedical scientist.

Specific to programmes with a year-long placement:
- ensure the students are trained in a supportive environment and fit to practice on graduation
- ensure that the quality of training is provided by reviewing student experience and making recommendations to enhance the quality of this experience.

The membership of the ELG should include:
- Chairman (usually the Programme Leader)
- Two or three academic representatives from the programme team for biomedical science
- professional representatives from local employers, ideally to include all clinical specialisms (clinical biochemistry, haematology and transfusion science, medical microbiology, cellular pathology, clinical immunology and genomics)

The benefits of university/employer liaison committees are to:
- ensure biomedical science practitioners can input to the design of the programmes
- ensure the programmes reflect the professional ethos of biomedical science
- ensure the programme content is current and meets the requirements of biomedical science and its practitioners
- ensure the programmes meet the needs of local employers and enhances the employability of graduates
- provide useful advice/feedback from prospective employers
- provide laboratory placement and employment opportunities for students and graduates
- provide a local network of practitioners and industry colleagues who can become visiting lecturers for the programme
- enable research strategy to include potential partnerships with employers.

The Employer Liaison Group (ELG) is expected to meet regularly (more than once) during each year, either face to face or on-line (e.g., Zoom, MS Teams). It is expected that the indicative agenda for these meetings will include reflection on the modules in each year of the programme, discussions on the currency of clinical specialism module content, placement information (as applicable), careers and employability embedded in the programme, plus relevant collaborations, events and other employer facing activities.

CVs for All Staff (Academic and Visiting Lecturers)
Short CVs must be provided (using the IBMS template) for all academic staff who will contribute to modules on the programme and for all external practitioners (visiting / associate lecturers) that will teach on the clinical discipline specific subjects.

The CVs should be compiled into a single document and split into the following groups – Academic Staff CVs and then Visiting Lecturer CVs.

The CVs should be in a standardised format and contain only the following information added to the IBMS staff CV template document per person:

- Name and title
- Present post and previous posts held in academic institutions
- Main teaching activities relevant to the programme
- Module names and codes that they contribute to
- Other activities relevant to programme delivery e.g., placement co-ordinator/ admissions tutor
- Academic qualifications (e.g. BSc, MSc, PhD), year obtained and awarding institution
- Professional qualifications (e.g. PGCE for higher education, any category of Fellowship of Advance HE, or professional qualifications in the clinical specialisms for visiting lecturers)
- Professional membership/involvement (last three years only)
- External professional activities (last three years only)
- Brief summary of research interests (last three years only)
- Publications (last three years only)
- Other professional development activities undertaken

SECTION 3: REQUIREMENTS OF IBMS ACCREDITED PROGRAMMES

The IBMS accredited BSc Biomedical Science programme(s) must be taught in English.

If the degree is obtained outside of the UK and / or the student's first language is not English, the education provider must provide evidence that graduates meet the HCPC requirements for English language proficiency. Please visit the HCPC website for more information.

It is recognised that education providers of bachelor's degree with honours courses and/or integrated master's degree courses combine, teach and assess the subject matter in different ways and support the development of a wide range of practical skills. However, it is expected that input from employers, particularly those who employ HCPC-registered biomedical scientists in health service laboratories, will make a significant contribution to the ongoing review of the curriculum to ensure it remains current to the needs of the regulated profession.

The IBMS QAA Subject Benchmark Statement mapping template document (see IBMS website) must be completed in full to demonstrate where in the programme the basic knowledge and clinical specialism subject areas are taught in the programme.

While it is acknowledged that it may be desirable to have an element of student choice in a modular degree programme, the QAA Subject Benchmark Statement requirements inform the core and key subject areas of the accredited degree that must be completed by all students. The content required is summarised below:

Basic Knowledge

The following subjects are core areas that underpin the key clinical laboratory specialities and are normally covered in FHEQ level 4 or SCQF levels 7 and 8. Please note that compensation or condonement of modules will not be permitted, where the learning outcomes are covered in another part of the programme:

• **human anatomy and physiology:** the structure, function, neurological and hormonal control of the human body, its component parts and major systems (musculoskeletal, circulatory, respiratory, digestive, renal, urogenital, nervous, endocrine) and their relationship to each other

• **developmental biology** basic reproductive biology and embryonic development, human life cycles, ageing, stem cells and regenerative medicine

• **biochemistry**: key chemical principles relevant to biological systems, the structure and function of biological molecules and the biochemistry of processes which support life, including cellular metabolism and its control

• **cell biology**: the structure and function of prokaryotic and eukaryotic cells; the cell as the fundamental unit of life; cell division, cell cycle, stem cells, cell specialisation and cooperation

• **molecular biology and genetics**: the structure and function of biologically important molecules,

including DNA, RNA and proteins and the molecular events that govern cell function; molecular biology overlaps with biochemistry, genetics and cell biology

• **immunology**: acute and chronic inflammation, structure, function and mechanisms of action of the components of the immune system; innate and acquired immunity

• **microbiology:** the structure, physiology, biochemistry, identification, classification, and control of microorganisms, including the roles of normal flora

Clinical Laboratory Specialisms

Graduates are required to have studied and passed all subject specialisms to meet the education standards required for registration with HCPC (following completion of both the accredited BSc (Hons) degree programme and successful verification of the IBMS Registration Training Portfolio).

Please note that all component assessments within the clinical specialism modules that cover these subject areas must be passed at 40%, not just the module passed overall (*see criteria 3.9*).

These clinical specialism areas specifically address the knowledge and understanding of disease processes in the context of clinical laboratory investigation and are normally covered across FHEQ level 5 and 6 or SCQF levels 9 and 10:

• **Cellular pathology** - the microscopic examination of normal and abnormal cells (cytopathology) and tissues (histopathology) for indicators of disease. A Biomedical Science graduate will have knowledge of:
- the gross structure and ultrastructure of normal cells and tissues and the structural changes which may occur during disease
- reproductive science, including infertility and embryology
- the preparation of cells and tissues for microscopic examination
-   the principles and applications of visualisation and imaging techniques, including microscopy, to aid diagnosis and treatment selection.

• **Clinical biochemistry** - the investigation of the function and dysfunction of systems, organs and tissues by the measurement of biochemical markers. A Biomedical Science graduate will have knowledge of:
- the range of common methods used for the collection and analysis of clinical samples
- investigations of major body and organ systems - for example, renal function tests, liver function tests, tumour marker tests, bone profile tests
- the principles and applications of biochemical investigations used for screening, diagnosis, treatment and monitoring of disease
- therapeutic drug monitoring and investigation of substance abuse.

• **Clinical immunology** - the study of immunopathological conditions and abnormal immune function. A Biomedical Science graduate will have knowledge of:
- the principles of the function and measurement of effectors of the immune response
- the causes and consequences of abnormal immune function, neoplastic diseases and

transplantation reactions together with their detection, diagnosis, treatment and monitoring
- principles and practice of immunological techniques used for screening, diagnosis, treatment and monitoring of disease prophylaxis and immunotherapy.

• **Haematology** - the study and investigation of the different elements that constitute blood and blood-forming organs in normal and diseased states. A Biomedical Science graduate will have knowledge of:
- the structure, function and production of blood cells
- the regulation of normal haemostasis
- blood cell morphology - identification of normal white blood cells and common red blood cell abnormalities
- nature and diagnosis of anaemias, haematological malignancies, haemorrhagic and thrombotic disease
- principles and practice of haematological techniques used for screening, diagnosis, treatment and monitoring of disease.

• **Transfusion science** - the identification of blood group antigens and antibodies which ensures a safe supply of blood and blood components. A Biomedical Science graduate will have knowledge of:
- interpretation of blood groups, causes of blood group anomalies, antibody screening
- the genetics, inheritance, structure and role of red cell antigens
- immune-mediated destruction of blood cells
- the preparation, storage and use of blood components
- patient blood management
- the selection of appropriate blood components for transfusion and possible adverse effects.

• **Clinical genetics** - the identification of genetic mutations and polymorphisms and their influence on disease processes. A Biomedical Science graduate will have knowledge of:
- genomic, transcriptomic, proteomic methods used to analyse and study human chromosomes and DNA
- the application of molecular biology and bioinformatics in medicine
- pharmacogenetics and personalised medicine
- principles and practice of techniques used for genetic testing for screening, diagnosis and monitoring of disease, and associated ethical issues.

• **Medical microbiology** (including virology) - the identification and investigation of pathogenic microorganisms, including viruses, bacteria, fungi protozoa, helminths and the diseases they cause. A Biomedical Science graduate will have knowledge of:
- the pathogenic mechanisms of a range of microorganisms
- public health microbiology (epidemiology and control of infectious diseases) and the concept of One Health
- principles and practice of techniques used for screening, diagnosis, treatment and monitoring of a range of infectious diseases, involving a range of methods to detect and identify microorganisms, prevention and control of infection, including vaccination, environmental and vector control
- antimicrobial chemotherapy, antimicrobial resistance (antibiotics, antivirals, antifungals, anti-parasitics).

The following areas (near patient testing and quality) are a core part of the subject benchmark statement and should be integrated throughout the programme (particularly in the clinical specialism modules). This should be clearly evidenced in the QAA Subject Benchmark Statement mapping template and in module descriptors:

Near-patient Testing (NPT) / Point-of-care Testing (POCT)
These comprise analytical testing performed for a patient by healthcare professionals outside the conventional laboratory setting. The principles and applications of near-patient testing will be treaded throughout the programme and be linked to practical classes and / or workshops for the clinical specialism modules. A Biomedical Science graduate will have knowledge of:
- the principles and applications of investigations used in screening, diagnosis, treatment and monitoring of disease using NPT equipment
- the application of NPT into patient pathways
- relevant quality assurance considerations.

Quality Control and Quality Assurance
Quality is central to the delivery of all laboratory services and is achieved through the incorporation of quality systems, quality control and quality assurance in all aspects of laboratory practice. It is expected that these concepts will be introduced in practical classes early in the programme and reinforced as students' progress through their studies. A Biomedical Science graduate will have knowledge of:
- interpretation of quality control standards (QC)
- importance of quality assurance and pre-analytical variables
- an understanding of the importance of external quality assessment (EQA)
- quality management (to include basic knowledge of the purpose of quality policy, audits, standard operating procedures, training and competency documentation, error logging and incident reporting, validation and verification, and reagent inventories)
- laboratory accreditation (to include basic awareness of UK Accreditation Service (UKAS) and International Organisation for Standardisation (ISO) standards)

Other Content Required for IBMS Accredited BSc Biomedical Science (Hons) Programmes

All IBMS accredited BSc (Hons) Biomedical Science programmes will also integrate the following areas in the programme, as defined in the QAA Subject Benchmark Statement for Biomedical Science and Biomedical Sciences (2023):

Bioinformatics and Systems Biology
Students will undertake and have knowledge of methods used to analyse high volumes of biological data, including use of appropriate computational tools and algorithms. Note that students will require an appreciation of the computational techniques commonly used and have a basic understanding of the properties of a network of interacting components in a system, as well as the properties of the components themselves.

Pharmacology
Students will develop an understanding of the importance of drug actions in the living organism for prevention and treatment of disease; the principles of drug-receptor interactions and the relationship between dose and response, routes of administration, types of drugs, how drugs are metabolised and eliminated from the body, toxic effects; approaches for drug discovery; personalised medicine/precision medical science.

Integrated Studies
Integrated studies can be delivered using integrated modules throughout the programme, or by having an integrated module in the final year of study, often called "Pathobiology" or "Biology of Disease". These modules will integrate content and knowledge from different clinical specialisms.

This will strengthen students' understanding of the study, investigation, diagnosis and monitoring of human health and disease and the therapeutic strategies applicable to disease states. Through a systems-led approach, students will integrate the clinical laboratory specialities with underpinning knowledge of Biomedical Science processes, investigation and treatment used for specific diseases.

Biomedical Science graduates will be aware of the current laboratory methods available for the study, investigation, diagnosis and monitoring of human health and disease in clinical and research environments. This will include an appreciation of the development and evaluation of new and current methods and therapeutic intervention strategies.

Research Project
An honours level project based in biomedical science is a mandatory component of an IBMS accredited degree programme. Assessment regulations must require a pass standard to be achieved for the project at honours level that must take the form of an independent project and can be a laboratory-based, a systematic review including statistical analysis and evaluation, or bioinformatics-type project but <u>not</u> a literature review (examples of this are provided in Appendix 2).

A biomedical science graduate will be aware of the need for compliance with health and safety

policies, good laboratory practice, risk and COSHH assessments, the Human Tissue Act and other relevant legislation associated with laboratory-based research.

The research project must be a major piece of assessed work that demonstrates development and achievement of research skills including:

- research design, methodologies, planning and execution of hypothesis-based research and scientific writing;
- generation, recording, collation and statistical analysis and interpretation of quantitative data and/or qualitative data;
- critical evaluation, problem-solving, use of primary or secondary data to reach a coherent conclusion, and effective presentation of results.

Submitted documentation for the research project module must provide details of the following:

- acceptable types of project
- arrangements for students to select a project
- arrangements for student support and supervision
- assessment weighting for different elements of the project
- examples of proposed project titles.

Skill Development

There are a range of skills that a biomedical science graduate will be expected to acquire during the programme of study. These include:

- discipline- and subject-specific skills associated with laboratory practice,
- research skills, including ethics, governance, audit, experimental design, data generation, statistical analysis, literature searching, scientific communication,
- key transferable skills, including communication, IT, numeracy, data analysis.

To record the skills that students develop within the programme, the IBMS Skills Mapping template document must be completed for both technical skills and transferable skills. This mapping document will be submitted as part of the supporting documentation to the IBMS panel.

The following themes should also be threaded through the programme and described in the self-reflection document to evidence how the programme(s) comply with the QAA Subject Benchmark Statement for Biomedical Science and Biomedical Sciences (2023):

Equality Diversity and Inclusion

The learning community should provide equity of opportunities for all, through considered course design and development, which is underpinned by valuing and harnessing differences and treating everyone with dignity and respect. Programme teams should create an environment that encourages openness and participation, where everyone feels respected, supported, valued and understands their personal responsibility for equality and inclusive practice. Programme providers, staff and students all have a role in, and responsibility for,

promoting equality and diversity and challenging biases and stereotypes, that is regularly reviewed and updated in line with institutional and government guidance.

Sustainability

It is important to note that sustainability is not solely about the environment. It is an ongoing process of addressing social, environmental and economic concerns to create a better world, and, as such, has particular relevance to Biomedical Science. Practical considerations might include reducing paper use, the LEAF initiative for improving the sustainability and efficiency of laboratories and discussion of ethics and environmental impact of laboratory work, replacing chemicals with sustainable alternatives if possible, and consider glassware in place of disposable plastic. An awareness of waste reduction, bioremediation, careful use of all non- renewable resources, alternative energy sources and pollution control can be explored in the curriculum.

The application of sustainable development in the higher education sector takes place through Education for Sustainable Development (ESD) which is the process of creating curriculum structures and subject-relevant content to support and enact sustainable development. As stated in the UNESCO 2019 definition, 'ESD is holistic and transformational education which addresses learning content and outcomes, pedagogy, and the learning environment.

Enterprise and Entrepreneurship Education
Entrepreneurship enhances employability by promoting personal development. It fosters those attributes that enable students to transition into successful graduates, actively participating in society and identifying opportunities to develop a meaningful career combined with the creation of cultural, social and economic value.

These attributes are integral in Biomedical Science and developing close links with employers and involving them in curriculum and assessment design will positively enhance graduate employability.

IBMS Accreditation Criteria for BSc (Hons) Programmes:

The IBMS accreditation criteria listed in the table below will be used to determine if the programme continues to meet the Institute's requirements for accreditation. These criteria should be used by the programme team as a guide when collating the information in the self-reflection document and supporting documentation submitted for scrutiny by the IBMS panel. The IBMS panel will review and assess the documentation against the criteria listed below:

1	Programme Management and Resources
1.1	There should be a clear rationale for delivering the degree programme that demonstrates the programme is sustainable, fit for purpose and effectively managed.
1.2	The degree programme will have a maximum of two intake points for full time student cohorts per academic year
1.3	The degree award title, fallback awards plus exit awards should be clearly articulated (exit awards and fallback awards **should not** be called Biomedical Science).
1.4	The programme specification and programme handbook must highlight the distinct features of the biomedical science honours degree courses, including information on the IBMS, HCPC and clarification on the routes to registration as a biomedical scientist
1.5	The programme must be taught in English
1.6	Students must be capable of meeting the HCPC English language requirements at the point of graduation. Universities admitting students from outside the UK will be expected to provide details of how this is facilitated.
1.7	The admissions process must give both the applicant and the education provider the information they require to make an informed choice about whether to take up, or make an offer, of a place on a programme.
1.8	The admission process must articulate how apprentices who do not hold level 2 or functional skills qualifications in Maths and / or English will be supported to complete the programme.
1.9	Where there is direct entry after the first year of the programme, there must be clear policies and procedures for assessing students by Accreditation of Prior Learning (APL) to ensure they have previously studied the correct curriculum and are able to meet all the learning outcomes in the programme.
1.10	The education provider must ensure that they adhere to equality, diversity and inclusion policies in relation to applicants.
1.11	There must be an adequate number of appropriately qualified and experienced staff employed by the education provider to deliver an effective programme.
1.12	Staff CVs must clearly show that suitably qualified and experienced academic staff and biomedical scientists (including visiting lecturers) deliver the taught content of the programme.

1.13	Staff development opportunities that support on-going research and scholarly activity of the programme teaching team (academic staff and visiting lecturers) must be clearly evidenced.
1.14	The education provider must evidence a clear strategy to provide adequate physical resources (e.g. teaching spaces and laboratories) to sustain programme delivery and expansion.
1.15	There must be a named liaison contact for each IBMS accredited programme, through whom the IBMS can disseminate IBMS information and request annual monitoring information.
2	**Module Content and Organisation**
2.1	The contents of each individual module must have sufficient depth and breadth and map clearly to the most recent QAA Subject Benchmark Statement for Biomedical Science and Biomedical Sciences (2023).
2.2	The basic knowledge components of the Subject Benchmark Statement for Biomedical Science and Biomedical Sciences (2023) must be clearly evidenced in modules in FHEQ Level 4 or SCQF level 7 and 8 of the programme.
2.3	The clinical specialisms for biomedical science from the Subject Benchmark Statement for Biomedical Science and Biomedical Sciences (2023) must be clearly evidenced in modules across FHEQ Level 5 and 6 or SCQF Level 9 and 10 of the programme.
2.4	The module descriptors/specifications must be clear, indicating appropriate delivery methods (lectures, practicals, tutorials, flexible learning), the module level, number of credits, plus clear information on learning outcomes and assessment methods).
2.5	The extent of mixed-mode (online/hybrid) delivery of all modules (including top-up modules) and its relationship to module learning and assessment strategy must be detailed.
2.6	The IBMS practical and transferrable skills mapping templates must be completed to show how these skills are developed by students through the programme.
2.7	Point of care testing and quality management considerations should be embedded in practical classes throughout the programme
2.8	At least one module must be included that contains integrated (multi-disciplinary) consideration of the clinical specialisms.
2.9	The organisation, allocation and supervision arrangements for the capstone project module and any supporting taught content and skill development must be clearly documented.
2.10	Example capstone project titles should be provided and details of the type of projects offered that meet IBMS requirements (Appendix 2)
2.11	If the capstone project is completed in the workplace, the time allocated to complete the work, duration of data collection, FHEQ or SCQF level of the project and supervision must all be aligned with the capstone projects completed at the university.
2.12	Reading lists and other resources for each module must be current and relevant.

3	Assessment
3.1	Assessment methods must be clearly related to the aims and objectives of the overall programme and link to specific learning outcomes and module content.
3.2	Assessment methods must be varied, authentic and inclusive.
3.3	Assessments for all modules (including top-up modules) must provide an objective, fair and reliable measure of learners' progression and achievement.
3.4	The IBMS assessment mapping document must be completed, to ensure a clear and logical assessment strategy with no undue clustering of assessment or marking.
3.5	The use of formal, closed book assessments must be evidenced across the duration of the programme. These must be clearly described and explained in the documentation, together with the education provider's policy on assessment.
3.6	The use of any Gen AI tools (for example ChatGPT) in any modules and / or assessments must be clearly articulated, along with the institutional policies on the permitted use of GenAI and any penalties for inappropriate use and other forms of academic misconduct (e.g. plagiarism)
3.7	Assessment policies must clearly specify requirements for progression and achievement within the programme, including the number of attempts permitted.
3.8	There must be an effective process in place for learners to make academic appeals.
3.9	Students must achieve a pass mark in all assessment components for modules that cover the clinical laboratory specialisms, as defined in the QAA Subject Benchmark Statement for Biomedical Science and Biomedical Sciences 2023.
3.10	Condonement/compensation is not permitted for any module(s) where the learning outcome(s) cannot be met elsewhere in the programme.
3.11	The research project (capstone experience) must be a minimum of 30 credits (note - if the majority of taught modules are 20 credits, the project should be 40 credits; if the majority of modules are 15 credits the project should be 30 credits; if the BSc programme is delivered through a 30 credit framework, the project can be 30 credits, provided that the development of research skills throughout the programme is clearly demonstrated).

4	Programme evaluation, curriculum development and quality assurance
4.1	The programme must provide adequate pastoral and academic support for students, including small group tutorials to ensure students' understanding of institutional policies and procedures.
4.2	Student feedback, responses to feedback and action plans should be clearly documented (including module evaluation and National Student Survey data)
4.3	A Staff/Student Liaison Committee (or equivalent) must meet regularly to inform the ongoing design, development, delivery and content of the programme.
4.4	An Employer Liaison Group / Committee (comprising employers, practitioners and service users) must meet at least twice per academic year to inform the design and delivery of the programme.
4.5	Internal annual monitoring reports (AMRs) and/or similar quality assurance documents must evidence regular and effective monitoring, evaluation and action-planning for the programme.
4.6	External examiners must be appropriately qualified and experienced and from another IBMS-accredited programme (in the case of programmes with integrated placements, the external examiner should also be an HCPC registered biomedical scientist).
4.7	External examiner reports, responses and action plans for the programme(s) from previous five year period must be provided to demonstrate quality assurance and enhancement processes.
4.8	The university may offer the opportunity to complete an additional credit bearing year that does not contribute directly to the required taught curriculum of the accredited degree (for example studying internationally, learning a different language or an unrelated subject area). Due diligence around securing these opportunities, ensuring their suitability and liaising with the provider are still a requirement of accreditation. NOTE: An international exchange programme cannot be used to replace any part of the accredited degree.

5	Placement
	All year-long placements:
5.1	The education provider must maintain a thorough and effective system for approving all placements, ensuring arrangements are designed to encourage safe and effective practice, independent learning and professional behaviour.
5.2	There must be clear evidence of the partnership agreements between the university and the placement provider, or alternative host institution, including monitoring of students, feedback arrangements and lines of responsibility.

5.3	A placement handbook must be available for students and employers that must contain the following information prior to placement: timings and the duration of any placement experience; any costs associated with the placement and who is responsible for these; intended learning outcomes to be achieved and means of assessment; expectations of professional behaviour; communication and lines of responsibility/accountability; support and monitoring during placement; arrangements for feedback on the placement experience.
	In addition to criteria 5.1-5.3, for non-clinical/industrial placements criterion 5.4 must also be met:
5.4	For students undertaking an industrial placement (or any other non-clinical placement) during their degree programme, formal arrangements must be in place to provide the student with a meaningful experience that is complementary to their degree.
	In addition to criteria 5.1-5.4, for clinical placements criteria 5.5-5.10 must also be met:
5.5	The selection process for placement must assess the suitability of applicants (e.g. criminal conviction check (basic DBS check), engagement and attitude to work). The student should **not** be liable for the cost of these mandatory disclosure checks.
5.6	The selection process for placement in a clinical laboratory must ensure that applicants are aware of and comply with any health requirements (e.g., appropriate vaccinations, occupational health arrangements etc.). The student should **not** be liable for the cost of these mandatory inoculations.
5.7	Current IBMS laboratory training approval for the laboratory offering the Registration Training Portfolio must be in place, evidenced to the programme team and monitored annually.
5.8	The placement provider must commit to providing the student with the opportunity to complete the IBMS Registration Training Portfolio.
5.9	The person responsible (directly or indirectly) for training students completing the IBMS Registration Training Portfolio must be an appropriately experienced HCPC registered biomedical scientist
5.10	Example training plans must be shared with the programme team that demonstrate how placement students will be supported to successfully complete the IBMS Registration Training Portfolio and meet the standards of proficiency for biomedical scientists at the point of graduation.
	In addition to criteria 5.1-5.3 and 5.4-5.10, for integrated degrees (where successful completion of the IBMS Registration Training Portfolio is mandatory for the degree award) criteria 5.11-5.14 must also be met:
	(Please note this section does not apply to non-UK programmes that have integrated placements/internships, unless students complete the IBMS registration training portfolio).
5.11	Verification of the Registration Training Portfolio must be coordinated by the education provider, in accordance with IBMS requirements and conducted by an external verifier. (In the case where a partial verification is held at the end of the placement, the remaining pieces of evidence submitted to the registration training portfolio in the final year of study must subsequently be verified by a HCPC registered biomedical scientist)

5.12	The education provider must demonstrate the delivery and audit of appropriate Training for Trainers events, ensuring trainers and verifiers receive relevant information and remain up-to-date.
5.13	Evidence must be provided that the person responsible for training in each clinical placement laboratory has appropriate experience or qualifications in training delivery.
5.14	The structure, duration and range of practice-based learning must support the achievement of the module learning outcomes and the HCPC standards of proficiency, as described in the Registration Training Portfolio.

APPENDIX 1: GENERAL INFORMATION

A.   Purpose of IBMS accreditation

The aim of professional body accreditation is to ensure that, through a spirit of partnership between the IBMS and Higher Education Institutions (henceforth referred to as education providers), a taught academic qualification at honours degree level is provided that prepares the graduate for suitable employment in the field of biomedical science, with a primary focus on the academic requirements for registration as a biomedical scientist. As described in the QAA subject benchmark statement for Biomedical Science and Biomedical Sciences (2023), the degrees are defined by the subject specific knowledge and skills. The title required for IBMS accredited degrees is *Biomedical Science* (singular), and not *biomedical sciences* (plural).

The following is not an exhaustive list but highlights the key purposes of IBMS accreditation.

1. Evidencing the achievement of a benchmark standard of education suitable for statutory regulation with the HCPC.

2. Ensures qualification is fit for purpose for those seeking careers in biomedical science.

3. Promotes the development of specific knowledge and competence that underpins education and training in biomedical science.

4. Ensures curriculum content is both current and anticipatory of future change.

5. Ensures research is embedded in academic teaching and student development.

6. Facilitates peer recognition of education and best practice, and the dissemination of information through education and employer networks.

7. Advances professional practice to benefit healthcare services, patients and professions related to biomedical science.

8. Strengthens links between the professional body, education provider, employer and student.

B.   IBMS Accreditation and the Health and Care Professions Council

The HCPC is the statutory regulator for biomedical scientists in the UK. An honours degree in biomedical science accredited by the IBMS meets the academic requirement for registration with the HCPC as a biomedical scientist: the legally protected title for an individual who *"analyses specimens from patients to provide data to help doctors diagnose and treat disease"*.

By undertaking a period of laboratory training in an IBMS approved training laboratory and completing the IBMS Registration Training Portfolio, graduates from IBMS accredited BSc programmes can receive the IBMS Certificate of Competence. The Certificate of Competence demonstrates that the graduate has met both the HCPC Standards of Education (SETs) and the Standards of Proficiency (SoPs) and are eligible to apply to the HCPC for statutory registration as a biomedical scientist.

In this context it is important to recognise that students must have studied and passed all elements of assessment stated within the QAA subject benchmark statement for Biomedical Science and Biomedical Sciences (2023) as clinical specialisms, as this directly reflects the knowledge and understanding required to practise as a Biomedical Scientist (i.e. those within the broad content of clinical laboratory science, (Cellular Pathology and Cytopathology, Clinical Biochemistry, Clinical Genetics, Clinical Immunology, Haematology, Medical Microbiology and Transfusion Science).

C.   Students and the IBMS

During their degrees, students are eligible to become an IBMS e-Student member (and receive an online subscription to our monthly magazine *The Biomedical Scientist* and quarterly publication the *British Journal of Biomedical Science*, plus many other benefits. The IBMS offers a group discount to universities wishing to purchase student membership for 10 or more students. Further information can be obtained by emailing subs@ibms.org.

All graduates are eligible to join the IBMS as a Licentiate member.

Each year the IBMS President's Prize award can be made by the university to an IBMS eStudent who achieves academic distinction graduating from an IBMS-accredited BSc Honours programme. Applications for the President's Prize must be made on the correct form which is emailed to the university IBMS liaison officer in the spring of each year. The President's Prize consists of an IBMS diploma, an award of £100.00 and free Licentiate membership for one year.

Please note - Only one award per university can be made each year and the nominated student must have achieved a first-class honours and be registered as a current member of the Institute by the end of January of their final year of the degree.

APPENDIX 2: IBMS APPROVED RESEARCH PROJECTS (CAPSTONE EXPERIENCE)

Below is a list of acceptable formats for research projects for IBMS accredited BSc programmes if the students chooses not to complete a laboratory-based project to collect data. These capstone experiences are adapted from the "Choosing your Bioscience Final Year research, Honours or Capstone Project" guide for students.
Available at: https://bit.ly/ChoosingBioCapstone

Big Data and Bioinformatics
BRIEF DESCRIPTION: The aim of these capstones is for you to use existing very large datasets or other sources of information to address research questions relevant to your degree or discipline using bioinformatics, data mining, analysis and visualisation, or similar tools and approaches. These sources of data/information could include large publicly available datasets or information sources or historical data from research groups within your School or Department
KEY SKILLS DEVELOPED: Research skills, experimental design, data mining, analysis and visualisation, numerical and analytical skills, use of large datasets, digital tools and technological skills, critical thinking, planning and organisational skills.
IDEAL FOR: Careers involving the handling, analysis and interpretation of large datasets/information, may be scientific research but could be in other areas e.g., artificial intelligence, policy development, sales and marketing, business development or consultancy. Careers involving the storyboarding or dissemination of information, or the use of digital tools and technologies.

Computer Modelling or Simulations
BRIEF DESCRIPTION: The aim of these capstones is gain research experience investigating the physiological, pharmacological or biochemical modulation of established models or simulations of body systems, organs or tissues (e.g., intact animals, heart, neurones). For models or simulations used in student education, it could include an evaluation of the scientific accuracy, validity and educational benefits of these.
KEY SKILLS DEVELOPED: Research skills, use of computer models and programmes, analytical and numerical skills, experimental design, independent and team-working, planning and organisational skills.
IDEAL FOR: Careers in scientific or medical research, or education. Careers involving the use of digital tools and technologies. Careers where knowledge or experience of the research process is required e.g., clinical trials, regulatory affairs, academic medicine, scientific writing.

Systematic Review with Quantitative Data-analysis
BRIEF DESCRIPTION: Systematic reviews are a highly systematic, pre-defined way of undertaking a critical review of the literature or other information. They are used extensively in clinical trials/health care research, and increasingly in other fields. In research, systematic reviews are normally undertaken by a team and therefore they make an ideal team-based capstone, more representative of the real-world. The data analysis aspect of a systematic review may entail formal meta-analysis techniques.

KEY SKILLS DEVELOPED: Research skills, qualitative & quantitative research methods, large datasets, ICT skills, numerical and analytical skills, planning and organisation, team working, leadership.

IDEAL FOR: Careers involving the collation, critical (including numerical or meta) analysis and reporting of large datasets/information (e.g., marketing, business, industry, government) or careers where systematic reviews are used extensively (e.g. clinical trials/health care, policy, social sciences). Careers involving significant scientific, technical or other prescribed formats of writing.

Qualitative Research

BRIEF DESCRIPTION: Qualitative research focuses on in-depth analysis of non-quantitative data. It is used to answer many types of research questions for which quantitative approaches would be inappropriate and contributes to knowledge-generation across a range of medically related fields. Qualitative research classifies data into patterns and themes in order to arrange and conclude results and does not usually employ statistical tools.

Examples include: semi-structured interviews (e.g., of patients or healthcare professionals); structured reviews of internet content (e.g. services offered by stem cell clinics); systematic reviews that explore qualitative themes (e.g. patient or service-user motivations and perspectives); ethical analyses of issues in biomedicine (e.g. ethics of sperm donation or organ transplantation); and systematic reviews of primary qualitative studies.

(Note that 'literature reviews' are not appropriate as projects – qualitative projects must involve the generation of new knowledge.)

KEY SKILLS DEVELOPED: Research skills, qualitative study design, thematic analysis, conceptual analysis, classification/taxonomy construction, theoretical discourse, reflexivity, planning and organisation, team working, leadership.

IDEAL FOR: Careers involving the collation, critical analysis and reporting of qualitative data (e.g., health policy, social science applied to medicine and healthcare, market research); careers where obtaining and analysing views from stakeholders is central (e.g. mediation, patient representation, government); careers involving dealing with philosophical arguments and debates (e.g. public health, medical ethics, civil service).

Educational Development

BRIEF DESCRIPTION: The aim of Educational Development capstones is for you to create new, or re-purpose existing, educational resources or activities for use in your Schools /Departments undergraduate programmes. It includes evaluation of need and/or the effectiveness of the developed resource or activity. It is NOT a research capstone evaluating educational methodologies/theories or using them as "human participants" in a scientific study. Instead, its principal output is an educational resource.

KEY SKILLS DEVELOPED: Communication skills, creativity, use of initiative, planning and organisational skills, independent working, educational awareness, digital and technological skills

IDEAL FOR: Careers in education, training or professional development, or in the development of educational resources or activities. Careers that require excellent communication skills or involve taking complex information and making it accessible to different audiences (e.g., public)

Team and Multi-team Based

BRIEF DESCRIPTION: In the workplace (including scientific research), outputs are usually not the

work of a single individual but a team. Graduate employers require employees who are team-players, have significant experience of team-working (on large projects) and though it, have developed leadership skills. Team-based capstones are a much better representation of the workplace than individual capstones, and an ideal opportunity to develop these key skills and graduate attributes. Taking this one stage further, any team comprises of individuals with widely differing knowledge, expertise and skill sets i.e. sub-teams within a team, all contributing to a common goal or output. In research, you will have different research groups collaborating on the same research question e.g. at the molecular, cellular and systems levels. Therefore, we should replicate this in multiteam based capstones, either in research or combining teams undertaking different formats of capstone (e.g. research, stakeholder opinion & public engagement) to collaborate on the same enquiry-based activity.

KEY SKILLS DEVELOPED: Team working, leadership, planning and organisation, emotional intelligence, skills gained via your individual capstone format.

IDEAL FOR: Any careers that involve team-working or leadership roles.

APPENDIX 3: EDUCATION PROVIDER EVIDENCE

1		
	Programme Management and Resources	**Suggested evidence**
1.1	There should be a clear rationale for delivering the degree programme that demonstrates the programme is sustainable, fit for purpose and effectively managed.	Context statement document that includes the background to development of the programme, relevance to sector, unique selling points, institutional context etc.
1.2	The degree programme will have a maximum of two intake points for full time student cohorts per academic year	Programme Specification and Programme Handbook
1.3	The degree award title, fallback awards plus exit awards should be clearly articulated (exit awards and fallback awards **should not** be called Biomedical Science).	All programme titles must be defined in the Programme Specification and Programme Handbook
1.4	The programme specification and programme handbook must highlight the distinct features of the biomedical science honours degree courses, including information on the IBMS, HCPC and clarification on the routes to registration as a biomedical scientist	List of module codes and titles by programme stage with credits, weighting, whether core/optional, co/pre-requisites etc. The role of the IBMS and HCPC in the training and statutory registration of biomedical scientists should be clearly explained.
1.5	The programme must be taught in English	Programme Specification and Programme Handbook

1.6	Students must be capable of meeting the HCPC English language requirements at the point of graduation. Universities admitting students from outside the UK will be expected to provide details of how this is facilitated.	Marketing material, admissions criteria, admissions/progression criteria, Programme Handbook
1.7	The admissions process must give both the applicant and the education provider the information they require to make an informed choice about whether to take up, or make an offer, of a place on a programme.	
1.8	The admission process must articulate how apprentices who do not hold level 2 or functional skills qualifications in Maths and / or English will be supported to complete the programme.	Programme Handbook and / or links to institutional policies
1.9	Where there is direct entry after the first year of the programme, there must be clear policies and procedures for assessing students by Accreditation of Prior Learning (APL) to ensure they have previously studied the correct curriculum and are able to meet all the learning outcomes in the programme.	Programme Handbook and / or links to institutional policies
1.10	The education provider must ensure that they adhere to equality, diversity and inclusion policies in relation to applicants.	
1.11	There must be an adequate number of appropriately qualified and experienced staff employed by the education provider to deliver an effective programme.	Academic staff and visiting lecturer CVs (including registered biomedical scientists).

1.12	Staff CVs must clearly show that suitably qualified and experienced academic staff and biomedical scientists (including visiting lecturers) deliver the taught content of the programme.	Academic staff and visiting lecturer CVs (including registered biomedical scientists).
1.13	Staff development opportunities that support on-going research and scholarly activity of the programme teaching team (academic staff and visiting lecturers) must be clearly evidenced.	Institutional documents / links and articulation in the context statement.
1.14	The education provider must evidence a clear strategy to provide adequate physical resources (e.g. teaching spaces and laboratories) to sustain programme delivery and expansion.	Context statement document should clearly describe the physical resources available to staff and students from the programme(s)
1.15	There must be a named liaison contact for each IBMS accredited programme, through whom the IBMS can disseminate IBMS information and request annual monitoring information.	Named Liaison person for the IBMS should be clearly stated on their CV

2	Module Content and Organisation	Suggested evidence
2.1	The contents of each individual module must have sufficient depth and breadth and map clearly to the most recent QAA Subject Benchmark Statement for Biomedical Science and Biomedical Sciences (2023).	Module descriptors
2.2	The basic knowledge components of the Subject Benchmark Statement for Biomedical Science and Biomedical Sciences (2023) must be clearly evidenced in modules in FHEQ Level 4 or SCQF level 7 and 8 of the programme.	Programme Specification, Programme Handbook and IBMS QAA Subject Benchmark mapping document (excel spreadsheet)
2.3	The clinical specialisms for biomedical science from the Subject Benchmark Statement for Biomedical Science and Biomedical Sciences (2023) must be clearly evidenced in modules across FHEQ Level 5 and 6 or SCQF Level 9 and 10 of the programme.	Programme Specification, Programme Handbook and IBMS QAA Subject Benchmark mapping document (excel spreadsheet)
2.4	The module descriptors/specifications must be clear, indicating appropriate delivery methods (lectures, practicals, tutorials, flexible learning), the module level, number of credits, plus clear information on learning outcomes and assessment methods).	Module descriptors
2.5	The extent of mixed-mode (online/hybrid) delivery of all modules (including top-up modules) and its relationship to module learning and assessment strategy must be detailed.	Programme Specification and Programme Handbook

2.6	The IBMS practical and transferrable skills mapping templates must be completed to show how these skills are developed by students through the programme.	IBMS Skills Mapping Template (excel spreadsheet)
2.7	Point of care testing and quality management considerations should be embedded in practical classes throughout the programme	Module descriptors and IBMS QAA Subject Benchmark mapping document (excel spreadsheet)
2.8	At least one module must be included that contains integrated (multi-disciplinary) consideration of the clinical specialisms.	Module descriptors and IBMS QAA Subject Benchmark mapping document (excel spreadsheet)
2.9	The organisation, allocation and supervision arrangements for the capstone project module and any supporting taught content and skill development must be clearly documented.	Research Project Handbook
2.10	Example capstone project titles should be provided and details of the type of projects offered that meet IBMS requirements (Appendix 2)	Research Project Handbook
2.11	If the capstone project is completed in the workplace, the time allocated to complete the work, duration of data collection, FHEQ or SCQF level of the project and supervision must all be aligned with the capstone projects completed at the university.	Bespoke section in the Research Project Handbook and / or a separate apprentices Research Project Handbook

2.12	Reading lists and other resources for each module must be current and relevant.	Module descriptors

3	Assessment	Suggested evidence
3.1	Assessment methods must be clearly related to the aims and objectives of the overall programme and link to specific learning outcomes and module content.	Mapping of the assessments per level to the programme learning outcomes, plus stated module learning outcomes in Module Descriptors
3.2	Assessment methods must be varied, authentic and inclusive.	IBMS Assessment Mapping template (excel spreadsheet) to indicate the type of assessment, whether it is formative or summative and which week it is held.
3.3	Assessments for all modules (including top-up modules) must provide an objective, fair and reliable measure of learners' progression and achievement.	Programme Handbook and External Examiner Reports
3.4	The IBMS assessment mapping document must be completed, to ensure a clear and logical assessment strategy with no undue clustering of assessment or marking.	IBMS Assessment Mapping template (excel spreadsheet)

3.5	The use of formal, closed book assessments must be evidenced across the duration of the programme. These must be clearly described and explained in the documentation, together with the education provider's policy on assessment.	Programme Specification, Programme Handbook and Module Descriptors
3.6	The use of any Gen AI tools (for example ChatGPT) in any modules and / or assessments must be clearly articulated, along with the institutional policies on the permitted use of GenAI and any penalties for inappropriate use and other forms of academic misconduct (e.g. plagiarism)	Programme Specification, Programme Handbook or links to online policies
3.7	Assessment policies must clearly specify requirements for progression and achievement within the programme, including the number of attempts permitted.	Programme Specification, Programme Handbook or links to online policies
3.8	There must be an effective process in place for learners to make academic appeals.	Programme Specification, Programme Handbook or links to online policies
3.9	Students must achieve a pass mark in all assessment components for modules that cover the clinical laboratory specialisms, as defined in the QAA Subject Benchmark Statement for Biomedical Science and Biomedical Sciences 2023.	Programme Specification, Programme Handbook or links to online policies
3.10	Condonement/compensation is not permitted for any module(s) where the learning outcome(s) cannot be met elsewhere in the programme.	Programme Specification, Programme Handbook or links to online policies

3.11	The research project (capstone experience) must be a minimum of 30 credits (note - if the majority of taught modules are 20 credits, the project should be 40 credits; if the majority of modules are 15 credits the project should be 30 credits; if the BSc programme is delivered through a 30	Programme Specification, Programme Handbook, Research Project Module Descriptor and Research Project Handbook
	credit framework, the project can be 30 credits, provided that the development of research skills throughout the programme is clearly demonstrated).	

4	Programme evaluation, curriculum development and quality assurance	Suggested evidence
4.1	The programme must provide adequate pastoral and academic support for students, including small group tutorials to ensure students' understanding of institutional policies and procedures.	Programme Handbook
4.2	Student feedback, responses to feedback and action plans should be clearly documented (including module evaluation and National Student Survey data)	Module evaluations and NSS data for each year of the previous accreditation period plus action plans, or institutional programme annual monitoring reports if this is covered in the report
4.3	A Staff/Student Liaison Committee (or equivalent) must meet regularly to inform the ongoing design, development, delivery and content of the programme.	Staff Student Liaison Committee minutes for existing similar programmes for the previous three years
4.4	An Employer Liaison Group / Committee (comprising employers, practitioners and service users) must meet at least twice per academic year to inform the design and delivery of the programme.	Employer Liaison Group meeting minutes and associated action logs

4.5	Internal annual monitoring reports (AMRs) and/or similar quality assurance documents must evidence regular and effective monitoring, evaluation and action-planning for the programme.	Institutional annual monitoring reports for existing similar programmes for the previous three years.
4.6	External examiners must be appropriately qualified and experienced and from another IBMS-accredited programme (in the case of programmes with integrated placements, the external examiner should also be an HCPC registered biomedical scientist).	Named external examiner in the Programme Handbook
4.7	Example external examiner reports, responses and action plans for similar programmes from the previous three year period must be provided to demonstrate quality assurance and enhancement processes.	External Examiner reports for each year for existing similar programmes for the previous 3 years and action plans
4.8	The university may offer the opportunity to complete an additional credit bearing year that does not contribute directly to the required taught curriculum of the accredited degree (for example studying internationally, learning a different language or an unrelated subject area). Due diligence around securing these opportunities, ensuring their suitability and liaising with the provider are still a requirement of accreditation. NOTE: An international exchange programme cannot be used to replace any part of the accredited degree.	Information in the Placement Handbook, plus agreements / memorandum of understanding with partners used for the placement provision

5	Placement	
	All placements:	Suggested evidence
5.1	The education provider must maintain a thorough and effective system for approving all placements, ensuring arrangements are designed to encourage safe and effective practice, independent learning and professional behaviour.	Information in the Placement Handbook, plus additional contracts or documentation with partners used for the placement provision
5.2	There must be clear evidence of the partnership agreements between the university and the placement provider, or alternative host institution, including monitoring of students, feedback arrangements and lines of responsibility.	Information in the Placement Handbook, plus additional contracts or documentation with partners used for the placement provision
5.3	A placement handbook must be available for students and employers that must contain the following information prior to placement: timings and the duration of any placement experience; any costs associated with the placement and who is responsible for these; intended learning outcomes to be achieved and means of assessment; expectations of professional behaviour; communication and lines of responsibility/accountability; support and monitoring during placement; arrangements for feedback on the placement experience.	Placement Handbook
	In addition to criteria 5.1-5.3, for non-clinical/industrial placements criterion 5.4 must also be met:	
5.4	For students undertaking an industrial placement (or any other non-clinical placement) during their degree programme, formal arrangements must be in place to provide the student with a meaningful experience that is complementary to their degree.	Information in the Placement Handbook, plus additional contracts or documentation with partners used for the placement provision
	In addition to criteria 5.1-5.4, for clinical placements criteria 5.5-5.10 must also be met:	

5.5	The selection process for placement must assess the suitability of applicants (e.g. criminal conviction check (basic DBS check), engagement and attitude to work). The student should **not** be liable for the cost of these mandatory disclosure checks.	Information in the Placement Handbook
5.6	The selection process for placement in a clinical laboratory must ensure that applicants are aware of and comply with any health requirements (e.g., appropriate vaccinations, occupational health arrangements etc.). The student should **not** be liable for the cost of these mandatory inoculations.	Information in the Placement Handbook
5.7	Current IBMS laboratory training approval for the laboratory offering the Registration Training Portfolio must be in place, evidenced to the programme team and monitored annually.	Copies of the certificates of IBMS Training Approval for each laboratory used for clinical placements must be provided and demonstrate current approval is in place and will remain in place until the placement is completed.
5.8	The placement provider must commit to providing the student with the opportunity to complete the IBMS Registration Training Portfolio.	Information in the Placement Handbook, plus additional contracts or documentation with partners used for the placement provision
5.9	The person responsible (directly or indirectly) for training students completing the IBMS Registration Training Portfolio must be an appropriately experienced HCPC registered biomedical scientist	Information in the Placement Handbook, plus Training Officer CVs

5.10	Example training plans must be shared with the programme team that demonstrate how placement students will be supported to successfully complete the IBMS Registration Training Portfolio and meet the standards of proficiency for biomedical scientists at the point of graduation.	Current training plans provided by the laboratories used for clinical placements
	In addition to criteria 5.1-5.3 and 5.4-5.10, for integrated degrees (where successful completion of the IBMS Registration Training Portfolio is mandatory for the degree award) criteria 5.11-5.14 must also be met:	
	(Please note this section does not apply to non-UK programmes that have integrated placements/internships, unless students complete the IBMS registration training portfolio).	
5.11	Verification of the Registration Training Portfolio must be coordinated by the education provider, in accordance with IBMS requirements and conducted by an external verifier. (In the case where a partial verification is held at the end of the placement, the remaining pieces of evidence submitted to the registration training portfolio in the final year of study must subsequently be verified by a HCPC registered biomedical scientist)	Information in the Placement Handbook
5.12	The education provider must demonstrate the delivery and audit of appropriate Training for Trainers events, ensuring trainers and verifiers receive relevant information and remain up-to-date.	Plans for Training for Trainers events plus indicative content for these events
5.13	Evidence must be provided that the person responsible for training in each clinical placement laboratory has appropriate experience or qualifications in training delivery.	Summary spreadsheet of the Training Officers for each laboratory used for clinical placements must be provided and demonstrate they have relevant experience and training (by providing a short CV).
5.14	The structure, duration and range of practice-based learning must support the achievement of the module learning outcomes and the HCPC standards of proficiency, as described in the Registration Training Portfolio.	Information in the Placement Handbook, plus additional contracts or documentation with partners used for the placement provision

About this document

Title:	Criteria and Requirements for the Re-accreditation of BSc Degrees in Biomedical Science
	For cohorts intakes from September 2026

Produced by:	Education Department
Version:	5.0
Active date:	November 2025
Review date:	August 2026
Contact:	Education Department
	T: +44 (0)20 7713 0214
	E: education@ibms.org

Copyright and disclaimer

About IBMS Publications

The IBMS publishes a wide range of professional and scientific documentation and guidance. Further information and downloadable publications are available on the website (www.ibms.org/resources/).