

CERTIFICATE OF COMPETENCE
(Non-accredited Degree followed by
Registration Training Portfolio)

IBMS Non-Accredited Degree Assessments (NADAs)

**GUIDANCE FOR EXTERNAL ASSESSORS** 

## **Contents**

1. Introduction	2
2. Structure and Function of the Assessment Panel	3
Biomedical Scientist	4
Academic	4
3. Assessment Process	6
APPENDIX 1: QAA SUBJECT BENCHMARK STATEMENT FOR BIOMEDICAL SCIENCES	9
Section A. Biomedical sciences programmes generally include:	9
Core Subjects	9
Section B. Subject-specific knowledge, understanding and skills in Biomedical Science:	10
APPENDIX 2: EXAMPLES OF INIDICATIVE CURRICULUM	12
Human anatomy and physiology	12
Biochemistry	12
Cell biology	12
Molecular Biology and Genetics	13
Microbiology	13
Immunology	13
Cellular pathology	13
Clinical biochemistry	13
Clinical Genetics	14
Clinical Immunology	14
Haematology	15
Transfusion Science	15
Medical Microbiology	15
Research Skills	15
APPENDIX 3: IBMS ACCREDITED DEGREES IN THE CONTEXT OF THE QAA/HCPC TIMELINE	16

## 1. Introduction

- 1.1 The IBMS offers a route to registration as a biomedical scientist that is based on a non-accredited degree, and completion of the IBMS Registration Training Portfolio. This route has been approved by the Health and Care Professions Council (HCPC) as "Certificate of Competence (Non -accredited degree followed by the Registration Training Portfolio) Flexible".
- 1.2 This document provides guidance notes for the assessment of academic qualifications that have not been formally accredited by the Institute of Biomedical Science (IBMS/the Institute). It details the components of an accredited course and the assessment process used to scrutinise all non-accredited academic qualifications. This is carried out in order to identify any deficiency against the academic requirements of the Health and Care Professions Council (HCPC) standards of proficiency. Occasionally assessments are carried out on 'older' IBMS accredited degrees to ensure that the content studied reflects the expectations of the current curriculum requirements. (For a timeline on requirement changes please see information included in Appendix 3)
- 1.3 All applications are assessed on the basis of the taught academic subject content and level of the qualification award. Candidates submitting qualifications for assessment must be able evidence they have attained a minimum level of qualification in core subjects relevant to biomedical science (see Appendix 1 Section A) that is equivalent to a UK degree at BSc (Hons) level. Higher level qualifications can also be submitted and may be from within the United Kingdom or acquired internationally. (Please note that all overseas qualification applications must include an assessment against UK ENIC<sup>1</sup> www.enic.org.uk the UK National Information Centre for global qualifications and skills. to provide a comparison to UK qualifications.)
- 1.4 Prior to application, candidates are advised that their qualification(s) should include some basic subjects at a level that is expected to be achieved in the first year of any Biomedical Science degree. Basic subjects include: Human Anatomy and Physiology, Biochemistry, Cell Biology, Molecular Biology and Genetics, Microbiology and Immunology. If very few, or none, of the basic subjects are included then the degree assessment application is often returned to the applicant and no fee taken. This is because for these applicants to pursue HCPC registration the most efficient route would be to request accreditation for prior learning (APL) from the university and enrol on an IBMS accredited degree.
- 1.5 Qualifications are assessed against the academic components described in the QAA subject benchmark statement for biomedical sciences (2019) which are the basis of the taught elements on an IBMS accredited degree. Applicants will receive their assessment outcome within a maximum of three months.

# 2. Structure and Function of the Assessment Panel

Institute of Biomedical Science, 12 Coldbath Square, London EC1R 5HL

Tel 020 7713 0214 Fax: 020 7837 9658 E-mail degreeassessment@ibms.org Website: <a href="www.ibms.org">www.ibms.org</a>
Guidance for Non-Accredited Degree Assessment External Assessors

Page 3 of 17 Version 1 (07/21)

<sup>&</sup>lt;sup>1</sup> Following the UK's leaving the EU, the former UK NARIC recognition agency function changes from a NARIC (which is an EU-only title) to an ENIC (the wider European title for national recognition agencies) in order to meet the UK's continuing treaty obligations under the <u>Lisbon Recognition Convention</u>.

- 2.1 Assessments are carried out by two assessors, one academic and one practitioner, who are familiar with the academic requirements for HCPC registered biomedical scientists, either as HCPC registered biomedical scientists or as academic closely associated with IBMS accredited biomedical science undergraduate degrees (e.g. programme leaders, IBMS/university liaison officers).
- 2.2 They will be appointed by the Institute of Biomedical Science (IBMS) against the criteria listed in Paragraph 2.3 once they have undergone IBMS training to be assessors for this component of the IBMS Certificate of Competence (Non-accredited Degree followed by Registration Training Portfolio) route.

The assessors will determine whether the academic content of the applicant's qualifications is equivalent to the threshold standards of the curriculum of a biomedical science degree.

2.3 External assessors for the panel must meet the following criteria:

#### **Biomedical Scientist**

- Member or Fellow of the Institute of Biomedical Science with a minimum qualification at academic level 7 (level 11 in Scotland) such as MSc, MPhil, IBMS Higher Specialist Diploma.
- HCPC registered
- Member of a university/employer liaison group, and/or has experience of the IBMS degree accreditation process.
- Is able to meet the roles and responsibilities of the External Assessor.

#### **Academic**

- Member or Fellow of the Institute of Biomedical Science
- Academic tutor on an IBMS accredited BSc degree programme
- Is able to meet the roles and responsibilities of the External Assessor.
- 2.4. All assessors must be fully conversant with the process for assessing applicants, the standard of evidence expected. They have the following roles and responsibilities.
  - Academic assessments are carried out electronically. Assessors must ensure they
    provide the IBMS with up-to-date email contact information for sending
    assessments. Assessments are usually sent out in batches of 5 or 10, however this
    depends on the assessor's availability.
  - Complete and provide outcomes for accepted assessments within 3 weeks per 5 assessments (6 weeks per 10 assessments) after receiving the documents to ensure assessment outcomes are provided to applicants within the advised timeframe.
  - Remain familiar with the current academic requirements for HCPC registration.
  - To judge that the subject or overall topic has been covered to an equivalent level based on information provided by the applicant.
  - Communicate with other assessor to make a reasoned judgement on descriptors for assigned assessments.

- If further information is required to make a reasoned judgement, the assessors are required to request further information from the applicant through the Education team to complete the assessment.
- Liaise with, the IBMS Education Department when required.

Page 5 of 17 Version 1 (07/21)

#### 3. Assessment Process

- 3.1 Initial screening of applications is carried out by the Education Team, who check the following:
  - All required documents are present and legible.
  - Award information including title of award, awarding institution, date of award, level of award, module titles and module identification codes are consistent and accurate across the documentation provided.
  - UK ENIC assessment of comparability to UK award (if applicable).
  - Applicant can be identified by the scanned copies of identification documents submitted.
  - Module specific content contains sufficient detail of the curriculum and learning outcomes.
- 3.2 Applications may be returned to the applicant without payment being processed if the qualification(s) are below the academic level commensurate with an honour's degree (for example a Certificate of Medical Laboratory Practice), or if there is a significant lack of core and key subject areas. Both situations would render the majority of the degree not relevant to biomedical science. The Education Team make this judgement (if necessary, checking with the Executive Head of Education and Education Manager) and the application is not seen by trained assessors.
- 3.3 Further information may be required for assessment, and the candidate is contacted by the Education Team email with a request to provide additional information before the documentation is sent to the external assessors.
- 3.4 Sending of assessments to assessors:
  - Part B of the degree assessment submissions containing module descriptions only are made available to a pair of trained assessors to be assessed on-line.
  - A batch of around 5 submissions is sent to a pair of assessors at once.
  - Assessors are required to acknowledge receipt of the assessments by return email.
  - Assessors should inform the IBMS in advance if they are unavailable to receive assessments, for example during busy academic periods or long periods of annual leave.
  - Assessors can specify the frequency of receiving batches of degree assessments according to their availability, for example "no more than 1 batch in any 2-month period"
  - It is requested that the assessors respond to submit outcomes for assessments within three weeks.
- 3.5 The assessor is instructed on the use of an on-line assessment review form in the format of an excel spreadsheet. (Please see "Use of the online Degree Assessment review form" document). The review form is organised into subject areas, and summarises the requirements outlined in the QAA subject benchmark statement for biomedical sciences (2019) (see Appendix 1) into manageable short criteria points. By

reference to the module content of the academic qualification(s), the assessor must make a reasoned judgement to assess whether each criteria is met, indicating this with an A (accepted) or an R (required for supplementary education). Please note: key disciplines in the qualification may not be presented in discrete units but may be spread across one or more areas of study. Word search is a useful tool to check for key words.

- 3.6 Appendix 2 is used as a further guide, which expands upon the criteria to assist the assessor to make an informed judgement. Some sub-topics may not be covered, or the depth in some areas may not be to the depth described. However, the assessor's responsibility is to judge that the subject/ overall topic has been sufficiently covered whereby asking the candidate to do supplementary education would not be beneficial.
- 3.7 The pair of assessors will be indicating A (accepted) or R (required) against criteria on the same spreadsheet where they can view one another's progress. In any areas where the two assessors do not agree, they must leave comments for one another until they reach a mutual agreement to be recorded in the combined review column. It is noted that assessors may remain anonymous to one another throughout this process or may opt to identify themselves or share contact details.
- 3.8 The second assessor is responsible for notifying the IBMS once the final outcome has been agreed upon.
- 3.9 Outcomes of the assessment process:
  - A. Acceptance of the qualification(s) without the requirements for further academic study. If the assessor does not identify any areas where supplementary education is required, the qualification is accepted;
  - B. Acceptance of the qualification(s) subject to supplementary education to make up a deficit in subject knowledge. If the assessor identifies areas of academic knowledge where supplementary education is required, the qualification is accepted subject to this requirement.
    - **Please note:** If a large amount of supplementary education is required, the guidance would be that the applicant considers enrolling on an accredited degree but requesting Accreditation for Prior Learning from the university.
- 3.10 If the assessor decides they are unable to make a decision because information pertaining to the taught subjects is insufficient to make a reasoned judgement, the assessor must request further information from the applicant (via the IBMS Education Team) before they complete the assessment process.
- 3.11 Applicants from outcomes A) and B) are informed of the outcome of the assessment process (with identification of shortfall where necessary) and of the requirement to complete the IBMS registration portfolio as a record of training for the award of the Certificate of Competence, in order to become eligible to apply to the HCPC for registration.
- 3.12 If the applicant is required to undertake supplementary study (top-up modules) in order to meet the HCPC academic standards of proficiency these requirements can

- only be achieved through studying appropriate modules from an Institute accredited undergraduate or (in some cases) postgraduate programme.
- 3.13 All applicants have the right of appeal. Appeals will be considered on the basis of additional information being provided or evidence-based challenges to the decision-making process. In the case of an appeal a third assessor, usually a senior, experienced member of the Education Department, will review the original assessments.

Page 8 of 17 Version 1 (07/21)

# APPENDIX 1: QAA SUBJECT BENCHMARK STATEMENT FOR BIOMEDICAL SCIENCES

The following has been adapted from sections 4, 5 and 6 of the 2019 benchmark statement and are requirements of an IBMS accredited degree in biomedical science.

### Section A. Biomedical sciences programmes generally include:

#### **Core Subjects**

- i) 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.
- ii) 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.
- iii) 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.
- iv) Genetics, genomics and human variation: the structure and function of genes, the principles of their inheritance, genetic disorders with particular biomedical significance, evolution and population biology.
- v) Molecular biology: 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.
- vi) Bioinformatics and systems biology: the computation of high volumes of biological data and the properties of a network of interacting components in a system, the computation of high volumes of biological data and the properties of a network of interacting components in a system.
- vii) Microbiology: the structure, physiology, biochemistry, identification, classification and control of micro-organisms, including the roles of normal flora.
- viii) Immunology: acute and chronic inflammation, structure, function and mechanisms of action of the components of the immune system; innate and acquired immunity.

Institute of Biomedical Science, 12 Coldbath Square, London EC1R 5HL

Tel 020 7713 0214 Fax: 020 7837 9658 E-mail degreeassessment@ibms.org Website: <a href="www.ibms.org">www.ibms.org</a>
Guidance for Non-Accredited Degree Assessment External Assessors

Page 9 of 17 Version 1 (07/21)

### Section B. Subject-specific knowledge, understanding and skills in Biomedical Science:

Within the broader biomedical sciences are clinical laboratory subjects that specifically address the knowledge and understanding of disease processes in the context of the study and investigation of those processes.

**Cellular Pathology** is the microscopic examination of normal and abnormal cells (cytopathology), and tissues (histopathology) for indicators of disease. **A** biomedical science graduate will have a 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** is 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, and methods used for the collection of, clinical samples that may be subjected to biochemical analysis;
- the principles and applications of biochemical investigations used for screening, diagnosis, treatment and monitoring of disease, including near-patient testing;
- therapeutic drug monitoring and investigation of substance abuse.

**Clinical Genetics** is 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, treatment and monitoring of disease and associated ethical issues.

**Clinical Immunology** is 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** is the study and investigation of the different elements that constitute blood 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;
- nature and diagnosis of anaemias, haematological malignancies, haemorrhagic and thrombotic diseases;
- principles and practice of haematological techniques used for screening, diagnosis, treatment and monitoring of disease.

**Transfusion Science** is 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:

- the genetics, inheritance, structure and role of red cell antigens;
- immune mediated destruction of blood cells;
- the preparation, storage and use of blood components;
- the selection of appropriate blood components for transfusion and possible
- adverse effects.

**Medical Microbiology** is the study and investigation of pathogenic microorganisms. A biomedical science graduate will have knowledge of:

- the pathogenic mechanisms of a range of microorganisms;
- public health microbiology;
- principles and practice of techniques for screening, diagnosis, treatment and monitoring of a range of infectious diseases, including isolation and identification of microorganisms;
- prevention and control of infection, including anti-microbial and anti-viral therapy (Including drug resistance);

### **Research Project**

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

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

Accreditation documents must provide details of the following:

- acceptable types of project (see Appendix 3);
- 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.

#### APPENDIX 2: EXAMPLES OF INIDICATIVE CURRICULUM

This section is to illustrate the range of topics covered under each subject heading. The list is not exhaustive, and some topics may be covered in more depth/breadth than others.

### Human anatomy and physiology

- Structure, tissue types and organisation of principal body systems.
- Digestive system: gastrointestinal tract and accessory organs, digestive processes. Cardiovascular system: heart and vessels, conduction system, cardiac cycle, homeostasis control, lymphatic vessels and tissues.
- Respiratory system: respiration and its control, gas exchange and transport. Urinary system: physiological role, regulation and control.
- Reproductive system: Male and female reproductive tract, control of reproductive functions.
- Sensory system: Receptors, pain, vision, hearing, equilibrium, taste, smell. Central and peripheral nervous system.
- Endocrine system: endocrine glands, hormonal mechanisms of action, physiological role of pituitary, pineal, thyroid, parathyroid, adrenal, pancreas and sex hormones.
- Muscular system, muscle contraction. Integumentary system: skin, accessory organs. Skeletal system: bone, joints, ligaments.

#### **Biochemistry**

- Biomolecules: lipids, carbohydrates, proteins, nucleic acids and their structures, properties and function within living organisms. Role of enzymes in catalysis, enzyme deficiency, bioenergetics, catabolism and anabolism.
- Carbohydrate metabolism: glycolysis, anaerobic and aerobic metabolism, citric acid cycle. Glucogenesis, glycogenolysis, glycogen synthesis. Mechanics of control of carbohydrate metabolism.
- Lipid metabolism: dietary lipids, catabolism of triacylglycerols and fatty acids. Biosynthesis of fatty acids. Control of fatty acid metabolism. Cholesterol synthesis. Lipoprotein metabolism.
- Protein metabolism: protein turnover, hydrolysis of proteins, degradation of amino acids, urea cycle.
- Integration of metabolic pathways and their regulation.

### Cell biology

- Basic structure and function of prokaryotic and eukaryotic cells; membrane structure and support systems, structure and function of the nucleus, ribosomes, endoplasmic reticulum, Golgi body, lysosomes, mitochondria.
- Stem cells, cell cycle and cell division.
- Mitosis and meiosis.
- Cell specialisation.

#### **Molecular Biology and Genetics**

- Mendel's laws of inheritance, genotype, phenotype, dominance, sex-linked variation, Genetic inheritance patterns, autosomal and sex-linked genes. Blood group inheritance, population genetics, cytogenetics, chromosomal abnormalities. Genomes, nuclear DNA, mitochondrial DNA. Gene expression, gene structure and regulation in prokaryotes and eukaryotes.
- Molecular biology overlaps with biochemistry, genetics and cell biology.
- Bioinformatics and systems biology: the computation of high volumes of biological data and the properties of a network of interacting components in a system, as well as the components themselves, including an appreciation of the algorithms to decipher biological relationships.

#### Microbiology

- History and scope of microbiology.
- Microbial taxonomy, diversity, structure and function. Eukaryotic microbes: fungi, protists, helminths etc.
- Prokaryotic and eukaryotic Viruses Microbial growth and its control.
- Bacterial genetics, pathogenesis and virulence
- Aseptic techniques, destruction of microbes (disinfection, sterilisation), antimicrobial agents.
- Human microflora. Enumeration, isolation and identification of microorganisms.

### **Immunology**

- Organisation and components of the human immune system;
- Structure, function and mechanisms of action. Innate and acquired immunity including acute and chronic inflammation, phagocytosis, complement and wound healing Memory and specificity, antigens and antibodies, molecular immunology.

### Cellular pathology

- Microscopic examination of normal and abnormal cells (cytopathology), and tissues (histopathology). Gross structure and ultrastructure of normal cells and tissues and the structural changes which may occur during disease. Reproductive science, including infertility and embryology.
- Preparation of cells and tissues for microscopic examination, including fixation, dehydration, impregnation and embedding. Tissue sectioning (microtomy), basic staining techniques and visualisation techniques including molecular cytological and immunochemistry techniques. Principles and application of microscopy for diagnosis of disease.

#### Clinical biochemistry

- Use of clinical biochemistry in the laboratory investigation of the function and dysfunction of systems, organs and tissues by the measurement of biochemical markers.
- Interpretation of clinical data.

- Sample selection, quality assurance, near patient testing, manual and automated methods of investigation of disorders of:
- Plasma lipids and lipoproteins;
- Carbohydrate metabolism e.g. diabetes, inherited metabolic disorders; Liver disorders, liver function tests; biochemistry of liver diseases;
- Renal function tests, assessment of renal failure, sodium/potassium measurement;
   Gastrointestinal tract disorders, digestion and disorders of absorption, pancreatic disease. Disorders of calcium, phosphate and magnesium metabolism.
- Role of plasma proteins, plasma protein abnormalities, immunoglobulins, tumour markers;
- Clinical enzymology, measurement of plasma enzymes in diagnosis;
- Endocrinology (clinical biochemistry abnormalities of thyroid, adrenal, hypothalamus, pituitary, gonads;
- Clinical biochemistry measurements in nutrition, investigation of vitamin/trace elements deficiencies;
- Clinical biochemistry of pregnancy and lactation, pregnancy tests, prenatal diagnosis
  of birth defects, postnatal screening test.
- Inborn errors of metabolism and hereditary diseases (phenylketonuria, glycogen storage disease, cystic fibrosis, genetic and biochemical basis of inherited disease, mass screening; Therapeutic drug monitoring (TDM), drugs of abuse and toxicology.

#### **Clinical Genetics**

- Principles and application of DNA sequencing, DMA microarrays relevance to targeted gene expression and function analysis in health and disease;
- Genomic, transcriptomic and proteomic methods used to analyse and study human chromosomes and DNA;
- Application of molecular biology and bioinformatics in medicine; Pharmacogenetics and personalised (stratified) medicine;
- Phenotypic changes in gene expression (epigenetics) in health and disease; Genetic testing and associated ethical issues.

#### Clinical Immunology

- Techniques used in the laboratory investigation of immunopathological conditions and abnormal immune function (immunoassays, haemagglutination, ELISA, tissue typing, functional assays.
- Lymphocyte activation, control and measurement of soluble immunoregulators (cytokines, interleukins, chemokines).
- Investigation of immune dysfunction: hypersensitivity, non-organ and organ specific autoimmunity (MHC, rheumatoid, thyroid, coeliac, pernicious anaemia, diabetes), immunodeficiency: complement, primary (T, B and NK cell, secondary (HIV).
- Transplantation, rejection, solid organs, bone marrow; Cancer: tumour antigens, immunosurveillance, evasion; Defence against infection, immunotherapy, prophylaxis.

Institute of Biomedical Science, 12 Coldbath Square, London EC1R 5HL

Tel 020 7713 0214 Fax: 020 7837 9658 E-mail degreeassessment@ibms.org Website: <a href="www.ibms.org">www.ibms.org</a>
Guidance for Non-Accredited Degree Assessment External Assessors

Page 14 of 17 Version 1 (07/21)

### Haematology

- Study and laboratory investigation of the different elements that constitute blood in normal and diseased states, manual and automated methods of investigations: cell identification and counting, haemoglobin variants, coagulation tests.
- Blood cell formation, haemopoiesis;
- Red cell metabolism, disorders of red cells;
- Haemoglobin biosynthesis, function, nature and diagnosis of anaemias, haemoglobinopathies, thalassaemias;
- Haemostasis, platelet structure and function, coagulation, fibrinolysis, thrombosis, coagulation therapy;
- Leucocyte structure and function, haematological malignancies, classification and treatment;

### **Transfusion Science**

- Main blood group systems, genetics and inheritance, structure and role of red cell antigens, blood group antibodies;
- Effective blood bank practice and component preparation/storage/provision;
- Adverse transfusion reactions, immune mediated destruction of blood cells, haemolytic disease of the newborn.

### Medical Microbiology

- Biology of pathogenic micro-organisms. Examples of infectious diseases could be tuberculosis, streptococcal disease, influenza, hospital acquired (nosocomial) infections; Overview of infections: gastrointestinal tract, respiratory tract, sexually transmitted infections, Epidemiology and public health microbiology: water, food and other environmental pathogens, sources of infection, spread of disease, disease control; Normal internal and external flora of the human body;
- Microbiological hazards and risk assessment;
- Diagnostic microbiology and virology: collection and preservation of samples, aseptic techniques, enumeration, isolation and identification;
- Infection control: antifungals, antivirals, and antibacterial antibiotics, antibiotic resistance.

#### Research Skills

These should include:

- i. research design, methodologies, planning and execution of hypothesis-based research and scientific writing,
- ii. generation, recording, collation and statistical packages for data analysis
- iii. critical evaluation, problem-solving, use of primary or secondary data to reach a coherent conclusion and presentation of results.

**Research Project:** This should be honours level independent project and can be a lab, metaanalysis, or bioinformatics type project but <u>not</u> a literature review.

Page 15 of 17 Version 1 (07/21)

Evidence should be a module descriptor and an abstract, contents page or extracted methods & results, which demonstrate the application of the skills gained during the assessed research module studied: experiments, report, interpret and presentation of data using scientific convention, including application of SI units and other units used in biomedical science).

APPENDIX 3: IBMS ACCREDITED DEGREES IN THE CONTEXT OF THE QAA/HCPC TIMELINE.

IBMS degrees have been accredited since the mid-70's. In terms of their suitability for HCPC registration the following timelines apply:

Pre-2002: There was no QAA subject benchmark and the IBMS criteria for accreditation were complimentary to the standards required for CPSM registration. All IBMS accredited degrees before 2003 should be assessed to determine their suitability for HCPC registration.

The QAA benchmark statement for Biomedical Science (2002) did not include Medical/Clinical Genetics as a named discipline. Similarly, the HCPC standards of proficiency until they were reviewed in 2007. IBMS degrees accredited from September 2003 - 2007 inclusive should be assessed for the presence of Medical/Clinical Genetics.

2008 onwards: IBMS accreditation from 2008 was against the QAA subject benchmark statement for Biomedical Science (2007) which included Clinical Genetics. These degrees met the HCPC academic requirements for the standards of proficiency for biomedical scientists from 2008.

2014/15 Revised HCPC standards of proficiency for biomedical scientists were published December 2014 and the following year a revised QAA subject benchmark statement for Biomedical Science (November 2015) was published. These have been the reference documents for IBMS degrees accredited from September 2016. There were no significant changes to the curriculum and degrees accredited from 2008 continue to meet HCPC requirements.

To note:

If the outcome letter for non-accredited degrees has exceeded its expiratory date it will require re-affirmation of the outcome for those assessed before July 2016. This should be checked for Clinical Genetics only. Letters issued after July 2016 will not require checking unless the QAA subject benchmark statement or HCPC standards of proficiency have changed and include academic subjects not previously assessed for.

Institute of Biomedical Science, 12 Coldbath Square, London EC1R 5HL

Tel 020 7713 0214 Fax: 020 7837 9658 E-mail degreeassessment@ibms.org Website: <a href="www.ibms.org">www.ibms.org</a>
Guidance for Non-Accredited Degree Assessment External Assessors

Page 16 of 17 Version 1 (07/21)

#### **About this document**

Title: IBMS Certificate of Competence by Equivalence

(Biomedical Scientist): Guidance for External

Assessors

Produced by: Education Department

Version: Version 1

Active date: July 2021

Review date: September 2024

Contact: Education Department

T: +44 (0)20 7713 0214

E: degreeassessment@ibms.org

#### Copyright and disclaimer

This document and its contents including the IBMS logo are the property and trademarks of the IBMS of Biomedical Science. The copyright on this material is owned by the IBMS (unless otherwise explicitly stated). This document or no part of it may be copied, reproduced, republished, downloaded or transmitted in any way, other than for your own personal, non-commercial use. Prior written permission must be obtained from the IBMS, using the contact details on the final page, for any other use of this material. All rights are reserved.

copyright © Institute of Biomedical Science 2015

#### **About IBMS Publications**

The IBMS publishes a wide range of professional and scientific publications and guidance. Further information and downloadable publications: wwww.ibms.org/publications

Page 17 of 17 Version 1 (07/21)