EST 1892 LSBU

Course Specification

<table>
<tr><th colspan="4">A. Course Information</th></tr>
<tr><td>Final award title(s)</td><td colspan="3">BSc (Hons) Applied Biomedical Science (Apprenticeship)</td></tr>
<tr><td>Intermediate exit award title(s)</td><td colspan="3">NA</td></tr>
<tr><td>UCAS Code</td><td></td><td>Course Code(s)</td><td>5846</td></tr>
<tr><td>Awarding Institution</td><td colspan="3">London South Bank University</td></tr>
<tr><td>School</td><td colspan="3">☒ ASC ☐ ACI ☐ BEA ☐ BUS ☐ ENG ☐ HSC ☐ LSS</td></tr>
<tr><td>Division</td><td colspan="3">Human Sciences</td></tr>
<tr><td>Course Director</td><td colspan="3">Dr Mohammed Mansour, PhD</td></tr>
<tr><td>Delivery site(s) for course(s)</td><td colspan="3">☒ Southwark ☐ Havering ☐ Croydon
☒ Other: Online</td></tr>
<tr><td>Mode(s) of delivery</td><td colspan="3">☐Full time ☒Part time ☐other please specify</td></tr>
<tr><td>Length of course/start and finish dates</td><td colspan="3">
<table>
<tr><th>Mode</th><th>Length years</th><th>Start - month</th><th>Finish - month</th></tr>
<tr><td>Part-time (for individuals employed within a pathology laboratory approved for training by the Institute of Biomedical Science (IBMS))</td><td>4</td><td>September</td><td>August</td></tr>
</table>
</td></tr>
<tr><td>Is this course suitable for students on a Tier 4 visa?</td><td colspan="3">No</td></tr>
<tr><td rowspan="2">Approval dates:</td><td colspan="2">Course(s) validation date</td><td>September 2022</td></tr>
<tr><td colspan="2">Course specification last updated and signed off</td><td>September 2022</td></tr>
<tr><td>Professional, Statutory & Regulatory Body accreditation</td><td colspan="3">The course is mapped to requirements of:
• The Institute of Biomedical Science (IBMS)
• National School of Healthcare Science (NSHCS) on behalf of Health Education England (HEE)
• Health and Care Professions Council (HCPC)</td></tr>
</table>

Link to Institute of Apprenticeship (IoA) Assessment Plan (Apprenticeship only)	https://www.instituteforapprenticeships.org/apprenticeship-standards/healthcare-science-practitioner-integrated-degree-v1-0	
Reference points:	Internal	• Corporate Strategy 2020 -2025 • Academic Quality and Enhancement Website • LSBU Mission Statement and Strategic Plan • LSBU Core Skills Policy • LSBU Academic Regulations • Applied Sciences School Roadmap –2020-2025
	External	• Subject Benchmark Statement for Biomedical Sciences (QAA, 2015) • Framework for Higher Qualifications (QAA, 2014) • SEEC Credit Level Descriptors, 2021 • Criteria and IBMS Requirements for the Accreditation and Re-accreditation of BSc (Hons) degrees in Biomedical Science (final-4, 2020-2021) • Health and Care Professions Council (HCPC)

B. Course Aims and Features

Distinctive features of course

The **BSc (Hons) Applied Biomedical Science (Apprenticeship)** qualification will lead to a career as Health and Care Professions Council (HCPC)-registered Biomedical Scientist in any pathology discipline – thae major Pathology disciplines (Blood Sciences, Cellular Sciences, Genomic Sciences, and Infection Sciences). This degree bridges the skills gap between associate practitioners working in pathology and Biomedical Scientists. They can practise independently with appropriate support and within the scope of their specialisation, under the supervision of a qualified and registered higher specialist healthcare scientist. Graduates of this programme will have a broad scientific background, as well as technical skills needed for laboratory work, as well as detailed knowledge and skills in a chosen specialisation. The four pathways are Blood Sciences, Cellular Sciences, Genomic Sciences, and Infection Sciences, and each year of study will include a strong specialist work-based training component that will be integrated with the academic content.

This degree programme is specifically designed to allow graduates to meet the requirements of the Department of Health via Health Education England (HEE), the Institute of Biomedical Science (IBMS), and HCPC and allow graduates to practise as a Biomedical Scientist in IBMS-approved pathology laboratories and demonstrate that the apprentice meets the outcomes of the Healthcare Science Practitioner (HCSP) Apprenticeship Standard. The degree also gives eligibility for Licentiate membership of the IBMS" (Criteria and Requirements for Accreditation and Re-accreditation of BSc (Hons) degrees in Biomedical Science (final-4, 2020-2021).

Graduates of this programme are qualified to work as HCPC registered Biomedical Scientists in their sponsoring laboratory after graduation. Even though students specialise in their final year, the generic nature of the registration portfolio allows graduates to seek employment in any of the pathology disciplines, subject to workforce planning. While the degree provides the necessary qualification to begin a professional career, it will be necessary to continue to develop skills throughout employment. This

	programme combines a scientific education with the development of lifelong learning skills. **This degree apprenticeship programme is under Life Sciences specialism of level 6 Healthcare Science Apprenticeship.** Details of the apprenticeship standard and course accreditation requirements, upon which this course is based, can be found here: • https://www.instituteforapprenticeships.org/apprenticeship-standards/healthcare-science-practitioner-integrated-degree-v1-0 • QAA Subject Benchmark statement for Biomedical Science (https://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/subject-benchmark-statement-biomedical-sciences.pdf?sfvrsn=2bf2c881_4) • The Modernising Scientific Careers Curriculum Strategy Group guidelines, the Framework for Higher Education Qualifications (https://www.qaa.ac.uk/docs/qaa/quality-code/qualifications-frameworks.pdf) The IBMS portfolio of competence (https://www.ibms.org/resources/documents/criteria-and-requirements-for-the-accreditation-and-re/) and HCPC standards (https://www.hcpc-uk.org/standards/standards-of-proficiency/biomedical-scientists/). • The list of HCS specialisms can be found at: http://www.ahcs.ac.uk/about-us/about-healthcare-science/
Course Aims	The **BSc (Hons) Applied Biomedical Science (Apprenticeship)** aims to: **1.** Provide a Biomedical Science programme for students from a variety of cultural and educational backgrounds by pursuing an honour's degree in Biomedical Science while continuing to work in an NHS laboratory or within a pathology laboratory approved for training by the IBMS. **2.** Develop subject knowledge and understanding in the core areas of Biomedical Science as well as the specialised areas with specialised work-based training to meet the requirements of Health Education England and the Subject Benchmark Statement(s). **3.** Develop an understanding of the NHS's/pathology organisation and role and how the Healthcare/Biomedical Science workforce contributes to patient care pathways and ensures the patient's safety and high quality of care. **4.** Develop research skills in accordance with Health Education England and the Subject Benchmark Statement(s). **5.** Allow the student to apply for registration as a Biomedical Scientist with the Health and Care Professions Council (HCPC) or any other future protected title that is appropriate to the degree; After successfully completing the degree and the IBMS portfolio, and HCPC-registration can be applied for; The portfolio demonstrates achievement of the HCPC Standards of Proficiency for a Biomedical Scientist and leads to the award of an IBMS Certificate of Competence. **6.** Develop personal transferable skills that will allow students to succeed in employment, career advancement, and/or further education.
Course Learning Outcomes	**A. Students will have knowledge and understanding of:**

A1- Specialist and core aspects of Biomedical Science (BMS) including Cell and Developmental Biology, Biochemistry, Microbiology, Human Anatomy and Physiology, Cellular Pathology and Imaging, Immunology, Medical Microbiology, and Clinical Genetics.

A2- The organisation and role of the pathology laboratories within the NHS and the laboratory specialities of Blood Sciences, Cellular Sciences, Genomic Sciences, and Infection Sciences.

B. Students will develop their intellectual skills such that they are able to:

B1- Write scientific clinical and laboratory reports.

B2- Prepare, process, analyse (including statistical analysis), and interpret experimental/clinical laboratory data, as well as display data in an acceptable format.

B3- Collect, interpret, and evaluate scientific literature.

B4- Use critical and analytical thinking skills, numerical and statistical methodologies, and problem-solving abilities.

B5- Discuss and assess current research in order to develop novel diagnostic procedures and therapeutic intervention strategies.

C. Students will acquire and develop practical skills that will enable them to:

C1- Employ skills associated with professional and ethical laboratory practise (i.e., Good Laboratory Practice), with a focus on Healthcare Science (HCS), such as the ability to conduct risk and COSHH assessments, evaluate and apply health and safety policies, and problem solving, as well as appropriately respond to The Human Tissue Act 2004, clinical governance, audit, and quality control and assurance.

C2- Select and assess experimental and clinical laboratory procedures and be able to apply them to experimental and laboratory research.

C3- Demonstrate the standards of proficiency required by HEE, IBMS and HCPC by successfully completing specialist work-based training.

D. Students will learn and develop transferable skills that will enable them to:

D1- Use a variety of personal transferable skills, such as communication, information technology (including the use of the internet and other electronic devices as sources of information and means of communication), teamwork, and decision-making skills, required for lifelong learning.

D2- Manage their own learning and engage in autonomous learning.

C. Teaching and Learning Strategy

- *provide an overview of teaching and learning activities (e.g., lectures, courses, practical classes, fieldwork);*
- *indicate the importance and volume of independent learning required (including the workload involved in studying on the course);*
- *inform students about subject-related and generic resources, e.g., libraries, laboratories, studios;*
- *provide an overview of learning support (opening hours and access will be especially relevant for part-time students); and*
- *provide information about staff who teach on the course (e.g., if postgraduate students might be teaching, the types of class they will teach and whether the training has been provided).*
- *Information on the virtual learning environment and blended learning.*

Learning outcomes

The program outcomes are referenced to the QAA benchmark statements for Biomedical Science (QAA, 2015) and the Frameworks for Higher Education Qualifications of UK Degree-Awarded Bodies (QAA, 2014). Additionally, the SEEC Credit Level Descriptor for Further and Higher Education (2021) and the Standard for the Level 6 Degree Apprenticeship for HCSP have been used as a guiding framework for curriculum design.

The learning and teaching strategy considers the program's learning outcomes, progression through study stages, the nature of the topic covered, and the necessity for students to demonstrate increased autonomy in learning as they progress through the programme. The learning and teaching plan adopts a blended learning approach where formal online lectures (synchronous) will help students gain information, understanding **(A1, A2, B5)**, and discipline-specific abilities **(B2, B3, C1, C2)**. In addition, students will be able to improve their comprehension of specific topics through on-site laboratory sessions held in combination with the theoretical components **(A1, A2, B5)**. These will also aid in the development of discipline-specific abilities **(A2, B2, B3, B4, C1, C2)** as well as personal transferable skills **(B4, D1, D2)**. Tutorials, workshops, and case studies will help students gain knowledge and understanding **(A1, A2, B5)**, as well as discipline specific **(B2, B3, C1, C2)** and personal transferable abilities **(A2, B2, B3, B4, C1, C2, D1)**.

All students in the course will study 15 core (common) modules and two specialised career choice modules depending on their chosen specialism (Blood Sciences, Cellular Sciences or Genomic Sciences). Therefore, all learning outcomes will be achieved in the core modules with more emphasis on these in the two chosen specialised modules. The majority of learning outcomes are developed through directed study, which includes directed reading of appropriate books and the creation of assessed work. The extensive work-based training enables the further development of all learning objectives **(A1-2, B1-5, C1-3, D1-2)**. Students are given relevant exercises as small group tasks to help them learn more effectively by collaborating on strategies. Through workplace learning models and work placement, there is also the potential for collaborative learning with healthcare professionals on-site **(A2, B5)**.

The curriculum is structured as an apprenticeship model, allowing students to gain the essential degree of knowledge in Biomedical Science to pursue a career as a Biomedical Scientist. All modules are core in the first and second years of the degree (levels 4 and 5), ensuring that students have the foundation in Biomedical Science essential for further study. At level 4, typical human biology, Biochemistry, and microbiology will be explored at the molecular, gene, cell, organ, and organism levels. Laboratory sessions are held in conjunction with the theoretical components to provide greater knowledge of study topics. Basic laboratory skills, as well as data handling and interpretation abilities, will be introduced. Students will be introduced to Anatomy TV, which is utilised in the Human Physiology module to supplement the teaching of basic anatomy and physiology processes.

The curriculum at level 5 continues to focus on basic areas of Biomedical Science, particularly the laboratory disciplines. Students will begin to investigate the mechanisms that disturb normal human biological function and, as a result, develop diseases, as well as the methods used to detect and treat diseases. Again, laboratory sessions will provide students with the opportunity to improve their comprehension of certain topics as well as to further build laboratory skills as well as data handling and interpretation skills. Students will also be encouraged to acquire additional personal transferable abilities and reflect on how these would prepare them for the workplace. Students will be encouraged to assess their own abilities and identify and address areas for growth. Specialist choices are selected at the end of level 5 to ensure that the decision is informed by experience in all four disciplines as well as work placement knowledge and understanding.

At level 6, students will deepen their knowledge and understanding of human diseases, with an emphasis on diagnostic advances in a specialised Biomedical Science laboratory. They will study three core modules (Clinical OMICS and Precision Medicine, Research Project for Biomedical Science & Work-based learning and Professional Practice 3 for Biomedical Scientists) as well as two specialised modules (Career Choice) within their specialism (one of four specialisms: Blood Sciences, Cellular Sciences, Genomic Sciences, and Infection Sciences). Through Work Based Learning 3, students will continue to reflect on methods to improve their own learning and performance, as well as develop autonomous learning abilities. Laboratory sessions, in conjunction with the research project (which is carried out in the workplace and under the supervision of both the clinical and university staff teams),

allow students to further improve their data handling and critical interpretation skills, as well as the autonomy with which they can be applied. Furthermore, the development of further numerical, written, and oral communication, IT, and group working abilities is encouraged.

A schedule of personal tutoring monitors student progress especially during the first year. The details of this and the action taken by the student to address any weaknesses will be recorded (see Appendix B).

Digitally Enhanced Learning will be incorporated into the teaching and learning (T&L) strategy to develop and support learning. Examples will include the University VLE (Moodle), Panopto lecture capture and on-line formative assessment platforms, discussion groups and remote tutorial support.

Students will be expected to engage in independent learning as outlined in each of the module descriptor documents which will be made available on the Moodle sites. Where appropriate this learning will be guided by staff via tasks set in class and on the VLE.

A wide range of subject-related resources are available within the LSBU Library. These reflect a typical academic repository that includes access to textbooks, licensed E-journal subscriptions, scientific databases, interactive e-learning platforms, and multimedia. Moreover, students have access to site-licensed software and assistive technologies to support their learning (if registered for Disability and/or specific learning difficulties).

The current infrastructure is well equipped to support the course. There are a total of 4 teaching and research laboratories that provide a rich learning environment for combining theory and practice. Each contains state-of-the art equipment to support delivery across all core and specialist modules.

There will be a requirement for 2 members of staff (one G7 and one G8) to support the delivery of the apprenticeship programme. New appointments will largely require clinical experience, training, and registration with a relevant body (e.g., HCPC, IBMS, etc.). Skills Coaches will be required depending on current pool and availability of skills coaches at LSBU.

The skills coach will be a key role to play to ensure that the apprentice is on track, recording their 20% off the job learning and developing the KSBs in the workplace. The skills coach will form the link between the academic programme and the implementation at the workplace. The role is non-academic and the skills that LSBU look for are good communication skills, ability to problem solve and work with stakeholders. If the skills coach has a professional background in the sector that will be advantageous but mainly, skills coaches to understand the apprenticeship standard, the academic programme, and the support available.

The core Biomedical staff that will support/teach/assess in the programme comprise: 1 Professor, 1 Associate Professor, 2 Senior Lecturers, and 2 Lecturers (at the time of writing) (One LSBU staff will be a link lecturer). Contributions to the programme may also be made by guest lecturers, external practitioners from the NHS as hourly paid lecturers and postdoctoral trainees. All staff are appropriately qualified and where postdoctoral trainees are involved, they will be appropriately trained and supervised.

Workplace Training

This degree apprenticeship program is employer-led and entails the apprentice to be employed in an **IBMS approval training laboratory**. This will develop the apprentice to become a competent Biomedical Scientist working in healthcare service. The degree apprenticeship requires a minimum of 20% ‘off the job’ (OTJ) training to satisfy apprenticeship funding requirements. The OTJ must take place during contracted working hours and can be at the site of employment or off-site at the University or via distance learning (online). The apprenticeship degree program consists of a blended learning delivery to meet the minimum 20% OTJ training through the day or block release at the University, distance learning, and work-based training in the laboratory. Apprentices will be using an e-Portfolio tool to reflect their growing competence in practice and development of the skills and knowledge required of a Biomedical Scientist. LSBU is introducing a new e-portfolio called Aptem. Each apprenticeship will have a learning plan with pre-planned dates for reviews which will happen every 3-4 months. Compliance with this will be monitored by the apprenticeship team and TQE. The reviews have been designed to meet

the requirements of the various bodies and to ensure they are a learning experience that support the apprentice. Also, the e-portfolio will capture the evidence required for; 1) the IBMS training portfolio 2) the apprenticeship EPA professional discussion, and 3) work-based learning assessments for 'Work-based learning and professional practice modules' (L4, 5, and 6).

The EPA is completed in the last year of the program and its purpose is to assess how the apprentice can demonstrate the knowledge and skills developed through the apprenticeship outlined in the HCSP Apprenticeship standards. EPA consists of three parts and is assessed by an independent assessor (1. Readiness for practice 2. Professional discussion, and 3. Research presentation). The laboratory training program run by employers and taught modules at the University will give the apprentice the opportunity to learn theory related to professional practice and develop practical competency in the workplace to support EPA expectations, HCPC, and IBMS standards. An important element of work-based assessments and preparation for EPA professional discussion and IBMS portfolio verification is a reflection by the apprentice on their personal and professional development. This will engage the apprentice with the HCSP standards whilst encouraging their CPD.

D. Assessment

- *inform students about the availability/definition of formative assessment; and*
- *provide an overview of summative assessment (the types of assessment used by the course, the percentage of assessment by coursework and the frequency of assessment).*
- *Indication about progression e.g. must pass all modules*

The assessment strategy is designed to allow students to demonstrate achievement of learning outcomes relevant to each module at the level of study as well as programme learning outcomes. These learning outcomes adhere to the Framework for Higher Education Qualifications and School of Applied Sciences (APS). At level 4, students will be tested on their breadth of knowledge mostly through MCQ and short answer questions **(A1, B5, C1)**. Students will obtain experience in report writing, data processing and interpretation through coursework tasks **(B1, B2, B3)**. Through progression to level 5 and 6, students will have the opportunity to demonstrate increasing skills in analysis, synthesis, and criticism through a variety of assessment strategies, such as written and oral examinations **(A2, B2, B3, B5, C2)**, report writing **(A1-2, B1-5, C1-3, D1-2)** group work **(A2, B2, B3, C1, C2)**, essays, including a dissertation/piece of independent study writing **(A1-2, B1, B3, B5, C1-2, D1-2)**, oral presentations **(A1-2, B1, B3-5, C1, D1-2)**, case studies **(A1-2, B1-3, B5, C1, D1-2)**, and the project report **(A1-2, B1-5, C1-3, D1-2)**. The project report gives a significant chance to demonstrate autonomy in data handling and critical interpretation in a research context. Professional competencies of students will be evaluated primarily in the workplace through work-based learning modules **(C3)**.

The course will use a blend of formative and summative assessment, as well as self- and peer assessment. Formative assessment will provide structured feedback to support students in the summative task, therefore scaffolding the approach to assessment and ensuring appropriate development of critical thinking, academic writing, practical and technical comprehension, and creativity.

A memorandum of understanding will describe the obligations and accountability for reaching the outcomes, as well as the tutors' help and direction. To proceed between stages and be eligible for a BSc, all modules must be passed with a grade of 40% or above (Hons). Students will be allowed to retake the next available opportunity based on the credit attempted at each Board of Examiners. When students do not have a complete profile of marks, a decision will be taken case by case.

Registration with HCPC as a Biomedical Scientist will require successful completion of the degree together with IBMS registration portfolio and the End-Point Assessment (EPA). Apprentices must utilise all their learning and skills acquired during the apprenticeship in order to pass the Apprenticeship Standard for the HCSP higher degree apprenticeship and HCPC standards.

Successful completion of EPA is mandatory to complete the apprenticeship programme and is required to obtain the BSc (Hons) degree. LSBU has been registered as EPA organisation (EPAO) for level 6-degree healthcare Science Apprenticeship.

- **End-Point Assessment (EPA) of the degree apprenticeship course (ST0413/AP01)**

The EPA is a synoptic assessment that requires apprentices to apply all of the learning and skills developed during the apprenticeship. It consists of three elements which are assessed by an Independent Assessor: **1) a Readiness for Practice Test (RPT)** which is a type of situational judgment test; **2) a Professional Discussion (PD)** based on the apprentice's portfolio or record of evidence, and **3) a Presentation and Review of the apprentice's research project completed as partial fulfilment of the BSc.** Details of end-point assessment plan of degree apprenticeship for healthcare science practitioners (level 6) can be found here: https://www.instituteforapprenticeships.org/media/1212/healthcare_science_practitioner.pdf

This is an integrated degree where LSBU is the End-Pont Assessment Organisation (EPAO), however the university will appoint independent assessors that are trained and expert in their practice. The verification elements required for the IBMS portfolio, will be assessed/checked independently by the IBMS.

A high-level blueprint that maps the three components of the synoptic EPA to each of the Standard for Healthcare Science Practitioners is shown below.

	Person-centred Care and Professional Practice	Personal Professional Development (PPD)	Health, Safety and Security	Quality	Technical Scientific Services	Clinical Care (including Communication)	Audit/ Service Improvement	Research & Innovation	Leadership
Element 1: Readiness for Practice Test (RPT)	√	√	√	√	√	√			
Element 2: Professional discussion	√	√	√	√	√	√	√	√	√
Element 3: Research Project Presentation and Review	√			√			√	√	

On-programme Assessment

Evidence of on-programme learning, and development should be gathered, usually in a record of evidence or e-portfolio. Workplace supervisors will be required to support regular, on-programme assessment of the apprentice's development of competency and performance in the workplace, and to ensure that there is full and sufficient evidence of the apprentice's readiness to undertake the EPA. A variety of assessment instruments are available for workplace assessment, e.g., Direct Observation of Practical Skills (DOPS), Observed Clinical Events (OCE) and Case based Discussions (CBD). It is also recommended that the apprentice engages in reflective writing to describe in their record of evidence/portfolio what they have learned about their personal and professional behaviours and what improvements they have been able to make during their apprenticeship. These reflective pieces are encouraged to promote life-long learning and as preparation activities for the Professional Discussion element of the EPA.

Assessment gateway

Apprentices will be eligible to attempt the EPA upon attainment or completion of:

- Level 2 functional skills in English and Mathematics
- a record or portfolio of evidence that documents the assessments and tasks completed to demonstrate that the skills, knowledge, and behaviours set out in the Standard have been achieved

This programme is an integrated degree, therefore the employer and university will determine the timing of the EPA and the apprentice's readiness to take the EPA.

End-point Assessment

The EPA consists of three components that are taken on the same day as part of the same assessment event with the same Independent Assessor. Apprentices must achieve a Pass, or better, in each of the three components to successfully complete the EPA. The EPA components are:

i. a 1 hour written Readiness for Practice Test (RPT) (which is a type of situational judgement test) which is set by the university;
ii. a face-to-face Professional Discussion (PD) between the apprentice and a trained Independent Assessor (Who has not been involved in the education or training of the apprentice) for the degree model. The Professional Discussion is based on the apprentice's record of evidence/portfolio (that includes a Competency Log of Skills) and which should take approximately 40 minutes. The university will provide assessors with guidance on the aims and purpose of the Professional Discussion, how it should be structured, how to prepare a series of questions to assess whether the apprentice has met the Standard, and how to grade the Discussion;
iii. a research presentation of up to 15 minutes, followed by a 15-minute discussion and review of the presentation content with the Independent Assessor.

The table above shows the aspect of the Standard assessed by each element of the EPA. Each element will be graded as either Fail, Pass or Distinction. The 3 elements of the EPA and the EPA grading criteria are described in detail below:

Element 1: Readiness for Practice Test (RPT) [60 minutes]

This assessment requires apprentices to review and respond to six workplace-based scenarios (**3 generic and 3 discipline questions specific**) that represent examples of events or occurrences in the workplace for which the apprentice should be able to describe appropriate actions to be undertaken. The scenarios will be multifaceted, tapping into various aspects of the Standard (as noted above), and will require recall and application of learning from both the academic and workplace training strands of the apprenticeship. The scenarios will be relevant to the apprentice's technical scientific and professional practice. Examples could include, e.g., setting out appropriate and comprehensive action for dealing with biological spillages; cardiac exercise stress testing and the risks associated with it; appropriate actions when observing a colleague transferring patient details from paper-based records to an electronic database as part of an audit. Apprentices will be asked to respond in a way that is appropriate to their level of attainment e.g., as a day-one Healthcare Science Practitioner. Universities will submit RPT scenarios to the AHCS as part of their External Quality Assurance (EQA) process in order to create a bank of scenarios from which other universities and Assessment organisations (AOs) will be able to choose six for use in a given EPA. This will help to ensure consistency across the scenarios used in the EPA.

Under test conditions specified by the university or AO, apprentices will be required to read the scenario and spend up to 10 minutes responding to an AO standardised set of questions about the scenarios drawn up by the AO. Each response should be a maximum of 200 words. It is recommended that apprentices' written responses are recorded electronically e.g., a word document on a computer. Paper-based responses can be used where no computer facility is available. Reasonable adjustments will be made for apprentices who request support for their learning disabilities in accordance with

either university regulations or the regulations of the AO. A small bank of sample scenarios will be made available to apprentices by the university or AO for illustration and practice.

The scenarios will sample across the following themes in the Standard:

- Person-centred care and Professional Practice
- Personal Professional Development
- Health, Safety and Security
- Quality
- Technical Scientific Skills
- Clinical Care (including communication)

The scenarios will assess competencies, consistent with values that are important across all healthcare sciences and reflect those specified in the NHS Constitution and *Good Scientific Practice*. These may include scientific technical practice, compassion, respect, empathy, probity, patient-centeredness, integrity, professionalism, health, and well-being, including coping with stress and anxiety.

A total of 18 marks are available for each scenario, as detailed below. Apprentices will need to achieve an average score of 60% across all six scenarios to pass the Readiness for Practice Test, and an average score of 75% to achieve a Distinction for this assessment. Apprentices must pass the RPT before completing the remaining elements of the EPA. The highest award for a retake is Pass (an award of Distinction is not available for retakes). Guidance on application of the grade descriptor will be provided by AOs to the Independent Assessors in order to contextualize the marking for individual scenarios. Both universities and AOs will need to apply these when using the marking scheme.

Marking criteria	Description	Scoring criteria	Weighting
Risk/s	A description of the risk/s inherent to the scenario	Fails to specify relevant risk/s (0) Partial response (2) Satisfactory description of risk/s (4) Comprehensive explanation of risk/s (6)	X2
Action/s	Specifies any action/s required, and, if more than one action, identifies the priority by which each action should be addressed	Fails to identify action/s (0) Partial response (1) Appropriate actions with inappropriate rank ordering (2) Appropriate action/s and rank ordering (3)	X1
Learning points	A list or description of how the risk/s identified in the scenario can/should be avoided in the future	Fails to identify learning points (0) Partial response (1) Identifies learning points that are relevant to the scenario (2) Comprehensive list or description of learning points (3)	X1

Assessor's global judgement appropriate to the relevant aspects of the Standard	An overall judgement about the quality of the response and the insight shown	Fails to meet Standard (0) Partially meets Standard (2) Meets Standard (4) Exceeds Standard (6)	X2
Total marks available per scenario			**18**
Total marks available for the RPT test			**108**
Pass mark (average across 6 scenarios)			**60%**
Pass mark for award of Distinction (average across 6 scenarios)			**75%**

Element 2: Professional Discussion (PD) [40 minutes]

This component of the EPA is designed to assess the apprentice's ability to engage in a professional discussion with the Independent Assessor in relation to the evidence that the apprentice has collated during their training with respect to learning and integrating knowledge and skills and which have been collated in their portfolio or record of evidence. This record includes the Competency Log (which is described in the on-programme assessment plan), an on-going assessment of the skills and professional behaviours achieved by the apprentice.

The PD is between the apprentice and Independent Assessor. It offers the apprentice an opportunity to highlight to the Independent Assessor examples of their personal, professional, and scientific technical development, key learning activities and events in the workplace that have influenced their development, and examples of challenges they have had to overcome. The PD will assess all areas in the Standard, including

- Person-centred care and Professional Practice: as demonstrated in the portfolio/record of evidence
- Personal Professional Development: including demonstrating critical reflection and professionalism
- Health, Safety and Security
- Quality
- Technical Scientific Services: as demonstrated through the Competency Log
- Clinical Care (including communication)
- Audit/Service improvement
- Research and Innovation
- Leadership

The PD will be structured by the Independent Assessor, using the AO's standardised framework that sets out how to begin the PD, the questions to ask, examples of evidence to request from the apprentice, and descriptors of the PD outcomes, based on the three 'global' criteria identified below. **This element will also include walk round question and answer tour of the laboratory which covers the verification element required for IBMS portfolio.**

Global Grading criteria	Grade descriptors
1. Discussion of apprentice's technical skill development	**Fail:** Unable to identify and explain how examples of learning in the portfolio contributed to skills development as specified in the Standard **Pass:** Able to show and explain how examples from the portfolio contributed to skills development as specified in the Standard **Distinction**: In addition to the Pass criteria, is also able to make links between the tasks

	completed and the professional standards required of a HCSP
2. Discussion of apprentice's personal and professional development	**Fail:** Unable to identify and explain how examples of learning in the portfolio contributed to personal and professional development **Pass:** Able to show and explain how examples from the portfolio contributed to personal and professional development **Distinction:** In addition to the Pass criteria, is also able to make links between the tasks completed and the professional standards required of a HCSP
3. Insight demonstrated to role of HCSP	**Fail:** Lacks insight to role of HCSP, or role is inappropriately conceived **Pass:** Demonstrates insight into the specific role of HCSP and its context in providing scientific HCS services **Distinction:** Demonstrates understanding of the role of HCSP and situates this in wider context of healthcare service provision e.g., as part of multi-professional teams delivering quality scientific services and the particular benefits to patient outcomes
Grading the Professional Discussion	**Fail = one or more Fails, or incomplete work-based Competency Log Pass = at least three Passes, plus complete work-based Competency Log** **Distinction = at least two Passes and one Distinction, plus complete work-based Competency Log**

Element 3: Research Project Presentation [30 minutes in total]

Since all apprentices are required to design and conduct a research project in partial fulfilment of the BSc, the parameters, and requirements for the research project itself will be set by individual universities and will be undertaken within the context of the degree programme. For the EPA, the apprentice will prepare and deliver a short presentation (maximum 15 minutes) to the Independent Assessor and their workplace supervisor (who is there to observe the proceedings) on the research project which will:

i. describe the research project that was completed as part of the BSc (Hons) degree. This should include a description of the research questions/hypothesis, the selected methods and sample, a brief summary of findings, conclusions, and limitations of the study.
ii. explain how it contributes to their understanding of their role as a HCSP and to any benefits for services and/or patients.

The Independent Assessor will ask the AO's standardised questions which have been developed by the AO, as well as have the opportunity to ask questions for clarity and further information. The apprentice's presentation will be graded based on its content and delivery and the apprentice's responses to the assessor's questions.

The grading criteria for the research presentation will not focus on reassessing the scientific or academic content of the project (which will have been assessed as part of the degree), but on the communication of the ideas contained within the project and the contribution the project makes to the understanding of healthcare science and services. It will be graded using the following criteria:

Criteria	Fail	Borderline Pass	Clear Pass	Excellent	Weighting
Clarity of content	0	1	2	3	x1
Oral communication	0	2	4	6	X2
Organisation of material	0	1	2	3	x1
Timing	0	1	2	3	x1
Use of visual aids	0	1	2	3	x1
Contribution to knowledge/understanding	0	1	2	3	x1
Response to questions	0	2	4	6	X2
Assessor's global judgement	0	2	4	6	X2
Total marks available					33
Fail					**Less than 60% of total available marks9**
Pass mark					**60%**
Pass mark for award of Distinction					**75%**

Summary of the overall EPA grading

The following table shows the grades available for each component of the EPA, and the overall grading for the EPA.

Component	Grading
Element 1: Readiness for Practice Test	Fail Pass Distinction
Element 2: Professional Discussion	Fail Pass Distinction
Element 3: Research Presentation	Fail Pass Distinction
Overall grading for the EPA	**Fail** = one or more Fails **Pass** = Passes all three elements **Merit** = at least two Passes and one Distinction **Distinction** = at least one Pass and two Distinctions

*Where an apprentice passes their degree programme but fails to achieve the EPA, registration with the relevant authorities will be considered on a case-by-case basis.

End-point – final judgment

The final judgment about whether the apprentice has passed the EPA and its grading will be made by the independent EPA assessor using the guidance provided below:

- all three parts of the EPA must be undertaken by the apprentice
- Assessment organisation (AO) (i.e., university) assessors will award the grade for each EPA element based on the assessment grading described above and then determine the overall grade for EPA of **Distinction, Pass or Fail** based on the criteria shown in the End Point Grading section.

Independence

The Assessment Organisation (i.e., the University) must ensure that assessors selected to assess individual apprentices are fully independent of that apprentice. They should not have had any involvement with the recruitment, on-programme training or assessment of the apprentice.

End-point – Summary of roles and responsibilities

Summary of Roles and Responsibilities		
	Preparation	**Assessment**
Apprentice	• completed a record of evidence, e.g. Portfolio of Evidence/Registration Portfolio including the competency log and formative assessments • agrees research project title with employer and university • plans/executes the research project	• completes and submits the record of evidence • completes and submits the research presentation
Employer	• supports the apprentice in the preparation and completion of the competency log and record of evidence, demonstrating achievement of the Standard • with the University and apprentice agrees the research project title and commits to any associated resource requests and agrees to provide the apprentice with suitable time to complete those parts of the research project that are not part of their normal job • advises the apprentice on requirements for	• appoints the AO where required (if not the university) • participates in the EPA interview (but must not have been involved in the training of the apprentice)

	synoptic assessment if through an AO		
Assessment Organisations (which could include universities)	• must be on the SFA's Register of Apprentice Assessment Organisations (RoAAO) • devises/administers the EPA according to the EPA plan • recruits sufficient independent assessors to meet the demand for the EPA in each specialism • ensures assessors have a recognised professional qualification gained through a formal training or equivalence route in the specialist area that they are to assess or registration with the relevant professional body and/or regulatory authority and a minimum of 1 year of practise based experience in a healthcare setting, such as the NHS, as well as the formal demonstration of an understanding of and skills in assessment, either through a minimum of 1 year of experience of work-based assessment or by holding an appropriate assessor qualification	• makes the arrangements for the EPA with the employer/apprentice • ensures that the independent assessors give an overall grading based on the grading of the 3 elements of the EPA	
Independent Assessors	• holds a professional qualification for the specialism related to the EPA or registration with the relevant professional body and/or regulatory authority • has received training in the role and responsibilities of the Independent Assessor	• makes a judgment on each element of the EPA • awards an overall grade for the EPA • provides a report on their assessment of the apprentice and rationale for their decision on the final grade	

Quality Assurance – internal

Universities offering integrated degrees will be subject to internal arrangements for the quality control of their degree programmes, including external examiner arrangements. They and other Assessment Organisations must be on the Register of Apprentice Assessment Organisations (RoAAO). Assessment Organisations (AO) will implement the QA processes and procedures required for acceptance on the RoAAO. Universities and AOs will:

- appoint independent assessors that are trained and expert in their practice (and will not have been out of practice for 3 years)
- nominate an independent Quality Assurance moderator who will undertake observations of Independent Assessors as they undertake the EPA with apprentices
- record EPA outcomes by assessor
- provide exemplar marking material
- sample their independent assessor decisions based on the following:

  1-10 candidates = all; 11-100 = up to 15; 101-200 = 20; More than 200 = 25

Quality Assurance – External

The Quality Assurance Agency for Higher Education (QAA) has responsibility for overseeing and assuring the quality of the BSc (Hons) degrees and thereby the EPA which is delivered as part of the integrated degree award.

It is proposed that the Academy for Healthcare Science (AHCS) be responsible for the External Quality Assurance (EQA) of the EPA for both integrated and non-integrated degrees of appropriately accredited BSc (Hons) in HCS (Practitioner Training Programmes) and Biomedical Science degrees until we are able to confirm whether QAA can deliver the External Quality Assurance (EQA) for the end-point assessment of integrated degree apprenticeships.

The AHCS sets the Standards for Education and Training (including assessment) for the HCS Practitioner degrees as it holds the HEE approved Professional Standards Authority's (PSA) accredited register for this occupational group. EQA for the Level 6 EPA will reflect these where it is relevant to do so. The AHCS acts as the representative professional body for the whole of the healthcare science profession. Through its Council of Professional Bodies, it will work co-operatively with relevant representative healthcare science professional bodies that may wish to be involved. Assessment Organisations offering EPAs do not have to be accepted by the AHCS for registration purposes, but the AHCS will require them to demonstrate good practice with respect to their internal quality control processes in accordance with RoAAO requirements. For example, AOs will need to provide evidence of:

- employing Independent Assessors who have the professional expertise/qualifications in healthcare science and teaching, learning and assessment;
- hosting training events for their Independent Assessors;
- monitoring grading decisions to ensure consistency and transparency across Independent Assessors;
- instigating a schedule of regular standard setting meetings between Independent Assessors to ensure that outcome decisions are valid, fair, safe, reliable and equitable.

In addition, there will also be a schedule of regular communications between AOs and the AHCS; an accessible process for dealing fairly and equitably with complaints and appeals; an agreed record keeping procedure; an evaluation and improvement procedure and any other processes, systems and procedures designed to ensure and document the quality of the delivery of the EPA by AOs, including the demonstration that the AO is open to obtaining advice from recognised healthcare science

specialists and organisations such as healthcare science professional bodies or the National School of HCS.

The AHCS was established by the UK Health Departments and HCS professional bodies to regulate the HCS workforce and quality assure its education and training. It will provide EQA for the EPA on a non- profit-making basis and meets the Trailblazer requirement for providing EQA as a Professional Body.

End-point - Grading

The end-point grade for the apprentices taking integrated degrees will be reflected in the overall classification of the degree. Where the EPA is delivered by an AO, the overall outcome for the grade of the EPA will be based on the grading of 3 elements of the EPA, according to the criteria shown below.

Award	**Grading**
Fail	**One or more Fails**
Pass	**Passes all 3 elements**
Merit	**At least 2 passes and 1 Distinction**
Distinction	**At least 1 Pass and 2 Distinctions**

Implementation

Affordability: In an integrated degree the costs of the EPA will be subsumed within the delivery and assessment of the degree. This is clearly the most affordable and cost effective approach for employers. Where an AO is used for a non-integrated degree apprenticeship, it is estimated that the cost of the EPA will be approximately 10% of the funding allocated for the degree. Employers will have to pay the cost of the EPA if an apprentice undertakes a non-integrated degree.

Professional Body recognition: On graduation, apprentices will be eligible to register with the relevant professional body; e.g. all HCSPs are eligible for registration on the AHCS accredited register **(**the HCS register that is recognised and supported by Health Education England [HEE]). **The completion of the apprenticeship in the Life Sciences also confers eligibility to apply for statutory regulation with the Health and Care Professions Council (HCPC).**

As the apprentice is required to demonstrate the knowledge, skills, understanding, behaviours and values described in the Apprenticeship Standard the recommended EPA can be undertaken in any HCS employment setting, large or small, public or private in England. The expected uptake of this apprenticeship programme is approximately 400 new starters per annum.

IBMS registration portfolio

- **The IBMS registration portfolio (Certificate of Competence for HCPC registration) is evaluated by an IBMS external verifier, and it will be awarded if:**

    1. Training is taken in a laboratory that holds current IBMS pre-registration training approval.
    2. Apprentice has completed all sections of the portfolio and signed off by an HCPC registered Biomedical Scientist (usually a training officer).
    3. Apprentice passes all three components: all HCPC standards met in the portfolio, presentation, and oral examination (viva).

Successful verification of the IBMS registration portfolio will also take place in the closing weeks of the degree.

E. Academic Regulations

The University's Academic Regulations apply for this course. Any course specific protocols will be

identified here.

F. Entry Requirements

Information on entry requirements should include:

- *academic entry criteria;*
- *non-academic entry criteria, for example requirements set by professional or sponsoring bodies;*
- *occupational health requirements;*
- *specific entry requirements, for example English or Welsh language requirements;*
- *standard typical offer and contextual offer, such as POLAR3 or index of multiple deprivation application;*
- *specific competency standards should be clearly stated;*
- *how to apply through routes other than UCAS, where applicable; and*
- *information about any possible interviews, writing of admissions essays, auditions or discussions of portfolios.*
- *Accredited prior learning or accredited experiential prior learning or up to date term.*
- *DBS regulations*
- *IELTS identify level of English required*

The University welcomes applications from all potential students, and the most essential factor in deciding whether to give a place is our judgement of a candidate's potential to profit from their studies and their capacity to thrive on this programme. Applications will be evaluated based on a combination of formal academic qualifications and other relevant experience.

- **Applicants must be currently full-time employed in a suitable role that offers an opportunity to develop the Knowledge, Skills and Behaviours as stated by the Apprenticeship Standard in an IBMS-approved training laboratory either in NHS or private sector and have the complete support of their employer to participate in this programme.**
- Apprentices can only apply through their sponsoring employer (not by themselves without employer knowledge).
- The minimum entry requirements for the course will be 104 UCAS points from a combination of "A" levels, one of which must be Biology or Chemistry at A2 with a minimum grade B **OR** other equivalent vocational qualifications (BTEC and level 3 apprenticeship) in the relevant subject area.
- Applicants must hold Mathematics and English grade C (level 4) or above at GCSE.

There will be some flexibility, and applications from apprentices with considerable relevant work experience but who do not satisfy the standard entry requirements will be considered. Prior to receiving an offer, these applicants may be required to take an admission assessment.

Prior to enrolling in the apprenticeship degree, an apprentice who has recently studied a syllabus as part of a previous qualification will be able to have their qualification examined by the course team to determine whether credit can be provided for any modules studied. This may imply that a student is not required to complete a specific unit of the HCS degree. Such knowledge and skills should be commensurate with those identified in the Policy and Procedures for the Accreditation of Prior Experiential Learning (APEL), of London South Bank University APEL, and in the guidelines on levels and learning outcomes produced by the Southeast of England Consortium for Credit Accumulation and Transfer (SEET / CAT, May 1996, SEEC Credit Level Descriptors for HE, 2010; LSBU Assessment and Examination procedure 2021-2022). **The previously studied modules must fulfil the required knowledge, skills and behaviours as stated in the apprenticeship standards.**

LSBU welcome applications from disabled apprentices, who will be evaluated on the same academic criteria as all other applicants. Applicants with disabilities may choose to contact the programme lead before applying.

G. Course structure(s)

Course overview

- *how the academic year is organised; and*
- *the building blocks of the course - modules*
- *provide structures for all modes of delivery, full time, part time, block delivery, etc.*

BSc (Hons) Applied Biomedical Science (Apprenticeship) – Part time

Students must be actively employed in an IBMS approved training laboratory (e.g., NHS Pathology laboratory) and have the full approval of their employer to participate in this programme. Work-based learning and competency evaluation will be performed for the students in the workplace. The Program takes an interdisciplinary approach to human diseases research. It includes studies of diseases origins and effects on the normal structure and functions of the human body, as well as a grasp of the scientific basis for laboratory examination, diagnosis, monitoring, and treatment of disease. It also creates and implements new technology to help improve patient care.

Professional and Statutory Regulatory Bodies

Apprentices who are successful in the academic component of the program and achieve: a) successful verification of the IBMS Registration Training Portfolio and b) a pass for the End Point Assessment (EPA) will gain the award of **BSc (Hons) Applied Biomedical Science (Apprenticeship)** and will be eligible to apply to the Health and Care Professional Council (HCPC) for registration to practice as Biomedical Scientist. In addition, apprentices must pass all modules at levels 5 and 6 as final compensatory credit for failed modules at these levels cannot be applied due to IBMS requirements.

Program structure

Awards are given in accordance with current London South Bank University Academic Regulations for Taught Programmes. The overall modular structure of the **BSc (Hons) Applied Biomedical Science (Apprenticeship)** is shown in Table 1. Fifteen core modules (total credit accumulation: 320 credits), including a Research Project for Biomedical Science module (40 credits). In addition, two career choice modules (total credit: 40 credits) will be required to be selected by students according to their chosen specialty (Blood Sciences, Cellular Sciences, Genomic Sciences, and Infection Sciences).

The four career choices (Blood, Cellular, Genomic and Infection Sciences) are available for students to choose one of them at the beginning of the course depending on the nature of the IBMS-approved training laboratory at which they are working. However, the title of their qualification (BSc (Hons) Applied Biomedical Science (Apprenticeship)) will be the same for all apprentices in the course.

The academic year will run as in three terms/semesters from September to August. Semesters 1 and 2 have 12 teaching weeks, and semester 3 has 10 teaching weeks.

Mode of study

The program is offered as part-time (4 years) and leads to the award of BSc (Hons) Applied Biomedical Science (Apprenticeship).

Table 1: Modular structure of the apprenticeship framework:

Year	FHEQ level	Module title	Type (Core/Career Choice)	Credits	Semester (S)
1	4	Biochemistry	Core	20	1
1	4	Molecular and Cellular Biology	Core	20	1,2

1	4	Human Anatomy and Physiology	Core	20	2,3
1	4	Work-based learning and Professional Practice 1 for Biomedical Scientists	Core	20	1,2,3
2	4	Microbiology	Core	20	1
2	4	Genetics	Core	20	1,2
2	5	Haematology and Immunology	Core	20	2
2	5	Clinical and Analytical Biochemistry	Core	20	2,3
2	5	Cellular Pathology and Imaging	Core	20	3
3	5	Medical Microbiology	Core	20	1
3	5	Research skills for Biomedical Scientists	Core	20	1,2
3	5	Work-based learning and Professional Practice 2 for Biomedical Scientists	Core	20	1,2,3
3	6	Clinical OMICS and Precision Medicine	Core	20	2,3
4	6	Research Project for Biomedical Science	Core	40	1,2
4	6	Work-based learning and Professional Practice 3 for Biomedical Scientists	Core	20	1,2,3
4	6	Clinical Haematology and Transfusion Science	Career Choice 1 (Blood Sciences)	20	1
4	6	Diagnostics in Biochemistry and Immunology	Career Choice 1 (Blood Sciences)	20	2,3
4	6	Clinical Cytopathology	Career Choice 2	20	1

			(Cellular Sciences)		
4	6	Diagnostics in Histopathology and Reproductive Science	Career Choice 2 (Cellular Sciences)	20	2,3
4	6	Medical Genetics	Career Choice 3 (Genomic Sciences)	20	1
4	6	Diagnostics in Genetics	Career Choice 3 (Genomic Sciences)	20	2,3
4	6	Infectious Diseases: Pathogenesis, Treatment and Management	Career Choice 4 (Infection Sciences)	20	1
4	6	Diagnostics in Infection Science	Career Choice 4 (Infection Sciences)	20	2,3

At level 6, students will deepen their knowledge and understanding of human diseases, with an emphasis on diagnostic advances in a specialised Biomedical Science laboratory. They will study three core modules (Clinical OMICS and Precision Medicine, Research Project for Biomedical Science & Work-based learning and Professional Practice 3 for Biomedical Scientists) as well as two specialised modules (Career Choice) within their specialism (one of four specialisms: Blood Sciences, Cellular Sciences, Genomic Sciences, and Infection Sciences). The career choices modules, each 20 credits include:

- **Clinical Haematology and Transfusion Science** & **Diagnostics in Biochemistry and Immunology** at level **6 for** Blood Sciences.
- **Clinical Cytopathology** & **Diagnostics in Histopathology and Reproductive Science** at level **6 for** Cellular Sciences.
- **Medical Genetics** & **Diagnostics in Genetics** at level **6 for** Genomic Sciences.
- **Infectious Diseases: Pathogenesis, Treatment and Management** & **Diagnostics in Infection Science** at level **6 for** Infection Sciences.

Collectively, these cover the 360 credits required for one career choice, namely Blood Sciences, Cellular Sciences, Genomic Sciences, and Infection Sciences.

In the workplace

A signed assurance statement is essential to allow the apprentice to work and study. This is a tri-partite agreement that sets out the commitments of each party and is signed by all parties (apprentice, employer and LSBU) to ensure that the learner can successfully complete the program. The agreement outlines the expectations of the apprentice, employer, and LSBU. The workplace will have a training team including a training officer/training lead and a mentor who will have day-to-day supervision of the apprentice. These individuals will support work-based assignments and professional portfolio alongside pastoral support and well-being of the apprentice. The workplace also will have a training coordinator (usually a department manager) with overarching responsibility for apprentices in the department and

the liaison with LSBU. An Employer Liaison supervisor or Link Lecturer is in place to manage communication between the employer and LSBU and conduct regular visits to apprentices' workplace to monitor their progress and well-being.

H. Course Modules

[Provide information on:
- core and optional modules;
- the circumstances when optional modules may not run; and
- how and when students will be informed if optional modules are changed]

Table 2: Assessment diet of the BSc (Hons) Applied Biomedical Science (Apprenticeship).

Year	FHEQ level	Module title	Type	Credits	Semester (S)	Assessment
1	4	Biochemistry	Core	20	1	• **Examination - (70%)** • **Coursework - Written laboratory report (1500 words) (30%)**
1	4	Molecular and Cellular Biology	Core	20	1,2	• **Examination - (70%)** • **Oral presentation (30%)**
1	4	Human Anatomy and Physiology	Core	20	2,3	• **Coursework 1 - Written (70%)** • **Coursework 2 - Written laboratory report (1500 words) (30%)**
1	4	Work-based learning and Professional Practice 1 for Biomedical Scientists	Core	20	1,2,3	• **Coursework - Written (50%)** • **Clinical Assessment (50%)**
2	4	Microbiology	Core	20	1	• **Examination (70%)** • **Examination - practical/laboratory (30%)**
2	4	Genetics	Core	20	1,2	• **Examination - (70%)** • **Oral presentation (30%)**
2	5	Haematology and Immunology	Core	20	2	• **Examination (70%)** • **Short-Time Limited Online Examination (30%)**
2	5	Clinical and Analytical Biochemistry	Core	20	2,3	• **Examination - (60%)** • **Coursework - Written laboratory report (40%)**
2	5	Cellular Pathology and Imaging	Core	20	3	• **Coursework 1 - Written (50%)** • **Coursework 2 - written laboratory report (1500 words) (50%)**

3	5	Medical Microbiology	Core	20	1	• **Examination - (60%)** • **Coursework - Written (40%)**
3	5	Research skills for Biomedical Scientists	Core	20	1,2	• **Coursework 1 - Written (50%)** • **Coursework 2 - Written (50%)**
3	5	Work-based learning and Professional Practice 2 for Biomedical Scientists	Core	20	1,2,3	• **Coursework A - Written (25%)** • **Coursework B - Written (25%)** • **Clinical Assessment (50%)**
3	6	Clinical OMICS and Precision Medicine	Core	20	2,3	• **Coursework - Written (60%)** • **Coursework - Poster (40%)**
4	6	Research Project for Biomedical Science	Core	40	1,2	• **Coursework - Written (70%)** • **Clinical assessment - Written (15%)** • **Viva voce (15%)**
4	6	Work-based learning and Professional Practice 3 for Biomedical Scientists	Core	20	1,2,3	• **Coursework A - Written (20%)** • **Coursework B - Written (20%)** • **Coursework C - Written (20%)** • **Clinical Assessment (40%)**
4	6	Clinical Haematology and Transfusion Science	Career Choice 1 (Blood Sciences)	20	1	• **Coursework - Written (60%)** • **Examination - (40%)**
4	6	Diagnostics in Biochemistry and Immunology	Career Choice 1 (Blood Sciences)	20	2,3	• **Examination - (60%)** • **Coursework - Poster (40%)**
4	6	Clinical Cytopathology	Career Choice 2 (Cellular Sciences)	20	1	• **Coursework - Written (60%)** • **Examination - (40%)**
4	6	Diagnostics in Histopathology and Reproductive Science	Career Choice 2 (Cellular Sciences)	20	2,3	• **Examination - (60%)** • **Coursework - Poster (40%)**
4	6	Medical Genetics	Career Choice 3 (Genomic Sciences)	20	1	• **Coursework - Written (60%)** • **Examination - (40%)**
4	6	Diagnostics in Genetics	Career Choice 3 (Genomic Sciences)	20	2,3	• **Examination - (60%)** • **Coursework - Poster (40%)**
4	6	Infectious Diseases: Pathogenesis,	Career Choice 4	20	1	• **Coursework - Written (60%)** • **Examination - (40%)**

		Treatment and Management	(Infection Sciences)			
4	6	Diagnostics in Infection Science	Career Choice 4 (Infection Sciences)	20	2,3	• **Examination - (60%)** • **Coursework - Poster (40%)**

Both formative and summative assessments are designed to develop skills in analysis, problem solving, critical thinking, debate, discussion, and evidence-based reflection. These types of skills are fundamental to apprenticeship standards and accreditation competency requirements for NSHCS, IBMS and professional practice. The assessments are designed to assess the taught theoretical knowledge and practical skills as well as the ability to apply this theoretical knowledge to real world challenges through laboratory investigations and client-based interventions.

I. Timetable information

[indicate:
Provide as much information as possible,

- *when students can expect to receive a confirmed timetable for study commitments; and*
- *if there is a teaching-free afternoon set aside for e.g. sporting/cultural activities.*
- *Don't specify a day(s) when teaching will take place if it may be changed.*
- *Prospective students should be kept informed of any changes.]*

Timetables will be provided to students via Moodle sites as soon as possible before the start of each semester. Students are expected to attend university one full day every week or two days in one week every two weeks (day release model) or through a hybrid model where students can do practical sessions of each module in a condensed week at the end of each semester while attending online lectures one day a week. The hybrid model is available for apprentices whose work places are far from London. The day will not change in the middle of the semester, although attendance in semester 1 may be on a different day than attendance in semester 2. The schedule will be created well in advance, and the sponsoring lab will be notified. Students may also be asked to attend lab practical on Saturday mornings on occasion.

J. Costs and financial support

Course related costs

- *provide information about other course-related costs (explain what is and what is not included in the tuition fees, e.g. such additional expenses as cost of books or other learning materials, specialist equipment, uniforms, clothing required for work placements, field trips, bench fees).*

The funding for this course programme is **£27000 (https://www.instituteforapprenticeships.org/apprenticeship-standards/healthcare-science-practitioner-integrated-degree-v1-0).** The UK government support for apprenticeship programmes depends on whether the employer pays the levy. More details are available for employers on the government website: https://www.gov.uk/employing-an-apprentice/get-funding

Costs that are in addition to the tuition fees in this course may include:

- The cost of textbooks and journal subscriptions.
- Student membership of relevant professional bodies and organisations such as the Institute of Biomedical Science.
- Costs related to subject specific seminars or conferences.
- Any extracurricular courses that a student wishes to take that are NOT provided and supported financially by the University, and accreditation applications.

List of Appendices

Appendix A: Curriculum Map

This map provides a design aid to help course teams identify where course outcomes are being developed, taught and assessed within the course. It also provides a checklist for quality assurance purposes and may be used in validation, accreditation and external examining processes. Making the learning outcomes explicit will also help students to monitor their own learning and development as the course progresses.

Modules			**Course outcomes**											
Level	**Title**	**Code**	**A1**	**A2**	**B1**	**B2**	**B3**	**B4**	**B 5**	**C1**	**C2**	**C3**	**D1**	**D2**
4	Biochemistry **(Core)**		**D/A**			**T/A**	**T**	**D**	**T**	**T/A**	**T/A**	**T**	**T**	**T**
4	Molecular and Cellular Biology **(Core)**		**D/A**			**T/A**	**T**	**D**	**T**	**T/A**	**T/A**	**T**	**T**	**T**
4	Human Anatomy and Physiology **(Core)**		**D/A**		**T/A**	**T/A**	**T**	**D**	**T**	**T/A**	**T/A**	**T**	**T**	**T**
4	Work-based learning and Professional Practice 1 for Biomedical Scientists **(Core)**		**T/A**	**D/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**D/A**	**D/A**	**D/T**	**T/A**	**T/A**
4	Microbiology **(Core)**		**D/A**			**T/A**	**T**	**D**	**T**	**T/A**	**T/A**	**T**	**T**	**T**
4	Genetics **(Core)**		**D/A**			**T/A**	**T**	**D**	**T**	**T/A**	**T/A**	**T**	**T**	**T**
5	Haematology and Immunology **(Core)**		**D/A**			**T/A**	**T**	**D**	**T**	**T/A**	**T/A**	**T**	**T**	**T**
5	Clinical and Analytical Biochemistry **(Core)**		**D/A**			**T/A**	**T**	**D**	**T**	**T/A**	**T/A**	**T**	**T**	**T**
5	Cellular Pathology and Imaging **(Core)**		**D/A**			**T/A**	**T**	**D**	**T**	**T/A**	**T/A**	**T**	**T**	**T**
5	Medical Microbiology **(Core)**		**D/A**			**T/A**	**T**	**D**	**T**	**T/A**	**T/A**	**T**	**T**	**T**
5	Research skills for Biomedical Scientists **(Core)**		**D/A**	**T**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T**	**T**	**T**
5	Work-based learning and Professional Practice 2 for Biomedical Scientists **(Core)**		**T/A**	**D/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**D/A**	**D/A**	**D/T**	**T/A**	**T/A**

6	Clinical OMICS and Precision Medicine		**D/A**	**T**		**T/A**	**T/A**	**T/A**	**T/A**	**T**	**T**		**T**	**T**
6	Research Project for Biomedical Science **(Core)**		**D/A**		**D/A**	**D/A**	**D/A**	**D/A**	**D/A**	**D/A**	**D/A**	**T/A**	**T**	**T**
6	Work-based learning and Professional Practice 3 for Biomedical Scientists **(Core)**		**T/A**	**D/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**D/A**	**D/A**	**D/T**	**T/A**	**T/A**
6	Clinical Haematology and Transfusion Science **(Career Choice 1)**		**D/A**			**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T**	**T**	**T**
6	Diagnostics in Biochemistry and Immunology **(Career Choice 1)**		**D/A**			**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T**	**T**	**T**
6	Clinical Cytopathology **(Career Choice 2)**		**D/A**			**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T**	**T**	**T**
6	Diagnostics in Histopathology and Reproductive Science **(Career Choice 2)**		**D/A**			**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T**	**T**	**T**
6	Medical Genetics **(Career Choice 3)**		**D/A**			**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T**	**T**	**T**
6	Diagnostics in Genetics **(Career Choice 3)**		**D/A**			**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T**	**T**	**T**
6	Infectious Diseases: Pathogenesis, Treatment and Management **(Career Choice 4)**		**D/A**			**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T/A**	**T**	**T**	**T**
6	Diagnostics in Infection Science **(Career Choice 4)**		**D/A**			**T/A**	**T**	**D**	**T**	**T/A**	**T/A**	**T**	**T**	**T**

Key 1: T = Taught, i.e., contributing in some way to the Learning Outcomes; D = Developed i.e., a focus of the module; A = Assessed and therefore also developed
Key 2:
**D3: negotiation skills, and lifelong learning in the field of healthcare science including enterprise and knowledge transfer skills will be developed during the Work-based learning and Professional Practice 1-3 for Biomedical Scientists.*

A. Students will have knowledge and understanding of:

A1- Specialist and core aspects of Biomedical Science (BMS) including Cell and Developmental Biology, Biochemistry, Microbiology, Human Anatomy and Physiology, Cellular Pathology and Imaging, Immunology, Medical Microbiology, and Clinical Genetics.

A2- The organisation and role of the pathology laboratories within the NHS and the laboratory specialities of Blood Sciences, Cellular Sciences, Genomic Sciences, and Infection Sciences.

B. Students will develop their intellectual skills such that they are able to:

B1- Write scientific clinical and laboratory reports.

B2- Prepare, process, analyse (including statistical analysis), and interpret experimental/clinical laboratory data, as well as display data in an acceptable format.

B3- Collect, interpret, and evaluate scientific literature.

B4- Use critical and analytical thinking skills, numerical and statistical methodologies, and problem-solving abilities.

B5- Discuss and assess current research in order to develop novel diagnostic procedures and therapeutic intervention strategies.

C. Students will acquire and develop practical skills that will enable them to:

C1- Employ skills associated with professional and ethical laboratory practise (i.e., Good Laboratory Practice), with a focus on Healthcare Science (HCS), such as the ability to conduct risk and COSHH assessments, evaluate and apply health and safety policies, and problem solving, as well as appropriately respond to The Human Tissue Act 2004, clinical governance, audit, and quality control and assurance.

C2- Select and assess experimental and clinical laboratory procedures and be able to apply them to experimental and laboratory research.

C3- Demonstrate the standards of proficiency required by HEE, IBMS and HCPC by successfully completing specialist work-based training.

D. Students will learn and develop transferable skills that will enable them to:

D1- Use a variety of personal transferable skills, such as communication, information technology (including the use of the internet and other electronic devices as sources of information and means of communication), teamwork, and decision-making skills, required for lifelong learning.

D2- Manage their own learning and engage in autonomous learning.

Appendix B: Embedding the Educational Framework for Undergraduate Courses

The Educational Framework at London South Bank University is a set of principles for curriculum design and the wider student experience that articulate our commitment to the highest standards of academic knowledge and understanding applied to the challenges of the wider world.

The Educational Framework reflects our status as University of the Year for Graduate Employment awarded by *The Times and The Sunday Times Good University Guide 2018* and builds on our 125 year history as a civic university committed to fostering social mobility through employability and enterprise, enabling our students to translate academic achievement into career success.

There are four key characteristics of LSBU's distinctive approach to the undergraduate curriculum and student experience:

- Develop students' professional and vocational skills through application in industry-standard facilities
- Develop our students' graduate attributes, self-awareness and behaviours aligned to our EPIIC values
- Integrate opportunities for students to develop their confidence, skills and networks into the curriculum
- Foster close relationships with employers, industry, and Professional, Statutory and Regulatory Bodies that underpin our provision (including the opportunity for placements, internships and professional opportunities)

The dimensions of the Educational Framework for curriculum design are:

- **informed by employer and industry** needs as well as professional, statutory and regulatory body requirements
- **embedded learning development** for all students to scaffold their learning through the curriculum taking into account the specific writing and thinking requirements of the discipline/profession
- **high impact pedagogies** that enable the development of student professional and vocational learning through application in industry-standard or authentic workplace contexts
- **inclusive teaching, learning and assessment** that enables all students to access and engage the course
- **assessment *for* learning** that provides timely and formative feedback

All courses should be designed to support these five dimensions of the Educational Framework. Successful embedding of the Educational Framework requires a systematic approach to course design and delivery that conceptualises the student experience of the curriculum as a whole rather than at modular level and promotes the progressive development of understanding over the entire course. It also builds on a well-established evidence base across the sector for the pedagogic and assessment experiences that contribute to high quality learning.

This appendix to the course specification document enables course teams to evidence how their courses meet minimum expectations, at what level where appropriate, as the basis for embedding the Educational Framework in all undergraduate provision at LSBU.

Dimension of the Educational Framework	Minimum expectations and rationale	How this is achieved in the course
Curricula informed by employer and industry need	Outcomes focus and professional/employer links All LSBU courses will evidence the involvement of external stakeholders in the curriculum design process as well as plan for the participation of employers and/or alumni through guest lectures or Q&A sessions, employer panels, employer-generated case studies or other input of expertise into the delivery of the course provide students with access to current workplace examples and role models. Students should have access to employers and/or alumni in at least one module at level 4.	The course has been developed with consultation with NHS employers such as St Thomas' Hospital and NHS Pathology and Blood Transplant.
Embedded learning development	Support for transition and academic preparedness At least two modules at level 4 should include embedded learning development in the curriculum to support student understanding of, and familiarity with, disciplinary ways of thinking and practising (e.g. analytical thinking, academic writing, critical reading, reflection). Where possible, learning development will be normally integrated into content modules rather than as standalone modules. Other level 4 modules should reference and reinforce the learning development to aid in the transfer of learning.	There is particular emphasis on academic preparedness within Work-based learning and Professional Practice 1-3 for Healthcare Scientists module (L4-6). This will include basic scientific, mathematical and statistical techniques, communication skills, and ICT. More in-depth data interpretation and use of more detailed analysis techniques via the Research Project module (L6).
High impact pedagogies	Group-based learning experiences The capacity to work effectively in teams enhances learning through working with peers and develops student outcomes, including communication, networking and respect for diversity of perspectives relevant to **professionalism** and **inclusivity**. At least one module at level 4 should include an opportunity for group working. Group-based learning can also be linked to assessment at level 4 if	Projects and group work are facilitated in lectures, practical and tutorial sessions. These are not all formally assessed but serve as important components of students' experiential learning through peer learning, presentation and communication skills. The development of the learning portfolio starts at the

	appropriate. Consideration should be given to how students are allocated to groups to foster experience of diverse perspectives and values.	Introduction to Biochemistry, at level 4, through Work-based learning and Professional Practice 1-3 for Healthcare Scientists at levels 4-6. There is substantial opportunity for development of interpersonal skills in the final year Project as student's network with other stakeholder in the research process including external organisations.
Inclusive teaching, learning and assessment	<u>Accessible materials, resources and activities</u> All course materials and resources, including course guides, PowerPoint presentations, handouts and Moodle should be provided in an accessible format. For example, font type and size, layout and colour as well as captioning or transcripts for audio-visual materials. Consideration should also be given to accessibility and the availability of alternative formats for reading lists.	This is achieved via the Module Moodle sites. Staff will upload a range of learning resources to support student learning. All students enrolled on a module will have access to the Moodle site and all module materials.
Assessment *for* learning	<u>Assessment and feedback to support attainment, progression and retention</u> Assessment is recognised as a critical point for at risk students as well as integral to the learning of all students. Formative feedback is essential during transition into university. All first semester modules at level 4 should include a formative or low-stakes summative assessment (e.g. low weighted in final outcome for the module) to provide an early opportunity for students to check progress and receive prompt and useable feedback that can feed-forward into future learning and assessment. Assessment and feedback communicates high expectations and develops a commitment to **excellence**.	Students experience variety of assessments during their first year, including testing of their proficiency in Mathematics in the Introduction to Biochemistry module, and in English and Mathematics as they commence the Work-based learning and Professional Practice 1 for Healthcare Scientists module at level 4. These modules provide a structure for greater use of formative or formative-to-summative assessment.
High impact pedagogies	<u>Research and enquiry experiences</u> Opportunities for students to undertake small-scale independent enquiry enable students to understand how knowledge is generated and tested in the discipline as well as prepare them to engage in	Modules featuring research projects and practical activities include Introduction to Biochemistry, Human Anatomy and Physiology, Cell and Developmental Biology,

	enquiry as a highly sought-after outcome of university study. In preparation for an undergraduate dissertation at level 6, courses should provide opportunities for students to develop research skills at level 4 and 5 and should engage with open-ended problems with appropriate support. Research opportunities should build student autonomy and are likely to encourage **creativity** and problem-solving. Dissemination of student research outcomes, for example via posters, presentations, and reports with peer review, should also be considered.	Human Genetics and Molecular Biology, Introduction to Microbiology, Work-based learning, and Professional Practice 1 for Healthcare Scientists, Clinical and Analytical Biochemistry, Haematology and Immunology, Medical Microbiology, Cellular Pathology and Imaging as well as Molecular Genetics. Many of these knowledge and skills are brought together to complete the final year Project.
Curricula informed by employer and industry need / Assessment *for* learning	<u>Authentic learning and assessment tasks</u> Live briefs, projects or equivalent authentic workplace learning experiences and/or assessments enable students, for example, to engage with external clients, develop their understanding through situated and experiential learning in real or simulated workplace contexts and deliver outputs to an agreed specification and deadline. Engagement with live briefs creates the opportunity for the development of student outcomes including **excellence**, **professionalism**, **integrity** and **creativity**. A live brief is likely to develop research and enquiry skills and can be linked to assessment if appropriate.	There is substantial opportunity for development of professional skills in the final year dissertation as students liaise with support staff, subjects and outside bodies. The dissertation also furthers the skills of data collection, interpretation and analysis, as well as presentation skills. Similar opportunities for development of life long learning, knowledge transfer, and negotiation skills exist in the Work-based learning and Professional Practice 1-3 for Healthcare Scientists.
Inclusive teaching, learning and assessment	<u>Course content and teaching methods acknowledge the diversity of the student cohort</u> An inclusive curriculum incorporates images, examples, case studies and other resources from a broad range of cultural and social views reflecting diversity of the student cohort in terms of, for example, gender, ethnicity, sexuality, religious belief, socio-economic background etc. This commitment to **inclusivity** enables students to recognise themselves and their experiences in the curriculum as well as foster understanding of other viewpoints and identities.	Staff use a range of materials in the delivery of their courses that include images and video. Consideration is also given to cultural, religion and gender diversity.

Curricula informed by employer and industry need	<u>Work-based learning</u> Opportunities for learning that is relevant to future employment or undertaken in a workplace setting are fundamental to developing student applied knowledge as well as developing work-relevant student outcomes such as networking, **professionalism** and **integrity**. Work-based learning can take the form of work experience, internships or placements as well as, for example, case studies, simulations and role-play in industry-standards settings as relevant to the course. Work-based learning can be linked to assessment if appropriate.	There is a strong emphasis on work-based learning proficiency through dedicated 3 modules through the duration of the programme (Work-based learning and Professional Practice 1-3 for Healthcare Scientists).
Embedded learning development	<u>Writing in the disciplines: Alternative formats</u> The development of student awareness, understanding and mastery of the specific thinking and communication practices in the discipline is fundamental to applied subject knowledge. This involves explicitly defining the features of disciplinary thinking and practices, finding opportunities to scaffold student attempts to adopt these ways of thinking and practising and providing opportunities to receive formative feedback on this. A writing in the disciplines approach recognises that writing is not a discrete representation of knowledge but integral to the process of knowing and understanding in the discipline. It is expected that assessment utilises formats that are recognisable and applicable to those working in the profession. For example, project report, presentation, poster, lab or field report, journal or professional article, position paper, case report, handbook, exhibition guide.	Students are required to develop a learning portfolio as part of the outcomes from the Work-based learning and Professional Practice 1-3 for Healthcare Scientists. This facilitates development of scientific writing, practical reporting, and research skills, and provides students with opportunities to develop their HCPC registration portfolio. The final year Project requires students to develop skills in scientific write-up and presentation and discussion of results.
High impact pedagogies	<u>Multi-disciplinary, interdisciplinary or interprofessional group-based learning experiences</u> Building on experience of group working at level 4, at level 5 students should be provided with the opportunity to work and manage more complex tasks in groups that work across traditional disciplinary	The course has been informed by Apprenticeship, IBMS and HCPC standards. We will expose the students to skill requirements of employers via guest speakers, industrial visits, engagement with professional scientists.

	and professional boundaries and reflecting interprofessional work-place settings. Learning in multi- or interdisciplinary groups creates the opportunity for the development of student outcomes including **inclusivity**, communication and networking.	
Assessment *for* learning	<u>Variation of assessment</u> An inclusive approach to curriculum recognises diversity and seeks to create a learning environment that enables equal opportunities for learning for all students and does not give those with a particular prior qualification (e.g. A-level or BTEC) an advantage or disadvantage. An holistic assessment strategy should provide opportunities for all students to be able to demonstrate achievement of learning outcomes in different ways throughout the course. This may be by offering alternate assessment tasks at the same assessment point, for example either a written or oral assessment, or by offering a range of different assessment tasks across the curriculum.	There is particular emphasis within Work-based learning and Professional Practice 1-3 for Healthcare Scientists modules on the development of a portfolio of learning and scientific practice. This will include basic scientific, mathematical and statistical techniques, communication skills, and ICT. Progression is made from level 4 and 5 to more in-depth data interpretation and use of more detailed analysis techniques via the Research Project module at level 6.
Curricula informed by employer and industry need	<u>Career management skills</u> Courses should provide support for the development of career management skills that enable student to be familiar with and understand relevant industries or professions, be able to build on work-related learning opportunities, understand the role of self-appraisal and planning for lifelong learning in career development, develop resilience and manage the career building process. This should be designed to inform the development of **excellence** and **professionalism**.	Projects and group work are facilitated in lectures, practical and tutorial sessions. These are not all formally assessed but serve as important components of students' experiential learning through peer learning, presentation, and communication skills. Focused career management skills will be developed through Work-based learning and Professional Practice 1-3 for Healthcare Scientists modules (L4-6).
Curricula informed by employer and industry need / Assessment *for* learning / High impact pedagogies	<u>Capstone project/dissertation</u> The level 6 project or dissertation is a critical point for the integration and synthesis of knowledge and skills from across the course. It also provides an important transition into employment if the assessment is authentic, industry-facing or client-driven. It is recommended that this is a capstone experience, bringing	This is achieved via the Module Moodle sites. Staff will upload a range of learning resources to support student learning. All students enrolled on a module will have access to the Moodle site and all module materials.

	together all learning across the course and creates the opportunity for the development of student outcomes including **professionalism**, **integrity** and **creativity**.	

Appendix C: Personal Development Planning

Personal Development Planning (PDP) is a structured process by which an individual reflects upon their own learning, performance and/or achievement and identifies ways in which they might improve themselves academically and more broadly. Course teams are asked to indicate where/how in the course/across the modules this process is supported.

Approach to PDP	Level 4-6
1 Supporting the development and recognition of skills through the personal tutor system.	Each student is provided with a tutor with the intention of this remaining constant throughout the duration of the programme. Students meet their personal tutor on the first day of the first year the course. 1-1 tutoring meetings are scheduled during the consolidation week additionally as required.
2 Supporting the development and recognition of skills in academic modules/modules.	Skills developed in all modules. Evidence-Based Practice and Practice-Based Evidence module and Research Project module (L6) provide a very clear pathway for the development and application of research skills.
3 Supporting the development and recognition of skills through purpose designed modules/modules.	Skills development and recognition is addressed and assessed throughout the portfolio.
4 Supporting the development and recognition of skills through research projects and dissertations work.	Work-based learning and Professional Practice 1-3 for Healthcare Scientists – L4-6 (Evidence-Based Practice and Practice-Based Evidence). Research project module – L6 (Dissertation).
5 Supporting the development and recognition of career management skills.	Work-based learning and Professional Practice 1-3 for Healthcare Scientists module provides foundational skills, including reflective practice and models of supervision to continue growth and development after the course.
6 Supporting the development and recognition of career management skills through work placements or work experience.	Students are actively working within an NHS Trust throughout the course and are expected to complete a portfolio of evidence of knowledge and skill acquisition

7 Supporting the development of skills by recognising that they can be developed through extra curricula activities.	Students are invited to attend the internal Research Seminar series throughout the year.
8 Supporting the development of the skills and attitudes as a basis for continuing professional development.	The on-the-job training of the apprenticeship provides an opportunity to evaluate practice in the workplace and demonstrate ability to transfer knowledge.
9 Other approaches to personal development planning.	Seminar activities and clinical supervision
10 The means by which self-reflection, evaluation and planned development is supported e.g. electronic or paper-based learning log or diary.	Clinical aspect of training (use of personal and professional logs and case studies). Use of online feedback system enables students to monitor their own academic development.

Appendix D: Terminology

[Please provide a selection of definitions according to your own course and context to help prospective students who may not be familiar with terms used in higher education. Some examples are listed below]

awarding body	a UK higher education provider (typically a university) with the power to award higher education qualifications such as degrees
bursary	a financial award made to students to support their studies; sometimes used interchangeably with 'scholarship'
collaborative provision	a formal arrangement between a degree-awarding body and a partner organisation, allowing for the latter to provide higher education on behalf of the former
Compulsory/core module	a module that students are required to take
contact hours	the time allocated to direct contact between a student and a member of staff through, for example, timetabled lectures, seminars and tutorials
coursework	student work that contributes towards the final result but is not assessed by written examination
current students	students enrolled on a course who have not yet completed their studies or been awarded their qualification
delivery organisation	an organisation that delivers learning opportunities on behalf of a degree-awarding body
distance-learning course	a course of study that does not involve face-to-face contact between students and tutors
extracurricular	activities undertaken by students outside their studies
feedback (on assessment)	advice to students following their completion of a piece of assessed or examined work
formative assessment	a type of assessment designed to help students learn more effectively, to progress in their studies and to prepare for summative assessment; formative assessment does not contribute to the final mark, grade or class of degree awarded to students

higher education provider	organisations that deliver higher education
independent learning	learning that occurs outside the classroom that might include preparation for scheduled sessions, follow-up work, wider reading or practice, completion of assessment tasks, or revision
intensity of study	the time taken to complete a part-time course compared to the equivalent full-time version: for example, half-time study would equate to 0.5 intensity of study
lecture	a presentation or talk on a particular topic; in general lectures involve larger groups of students than seminars and tutorials
learning zone	a flexible student space that supports independent and social earning
material information	information students need to make an informed decision, such as about what and where to study
mode of study	different ways of studying, such as full-time, part-time, e-learning or work-based learning
modular course	a course delivered using modules
module	a self-contained, formally structured unit of study, with a coherent and explicit set of learning outcomes and assessment criteria; some providers use the word 'course' or 'course unit' to refer to individual modules
national teaching fellowship	a national award for individuals who have made an outstanding impact on student learning and the teaching profession
navigability (of websites)	the ease with which users can obtain the information they require from a website
optional module	a module or course unit that students choose to take
performance (examinations)	a type of examination used in performance-based subjects such as drama and music
professional body	an organisation that oversees the activities of a particular profession and represents the interests of its members
prospective student	those applying or considering applying for any programme, at any level and employing any mode of study, with a higher education provider

regulated course	a course that is regulated by a regulatory body
regulatory body	an organisation recognised by government as being responsible for the regulation or approval of a particular range of issues and activities
scholarship	a type of bursary that recognises academic achievement and potential, and which is sometimes used interchangeably with 'bursary'
semester	either of the parts of an academic year that is divided into two for purposes of teaching and assessment (in contrast to division into terms)
seminar	seminars generally involve smaller numbers than lectures and enable students to engage in discussion of a particular topic and/or to explore it in more detail than might be covered in a lecture
summative assessment	formal assessment of students' work, contributing to the final result
term	any of the parts of an academic year that is divided into three or more for purposes of teaching and assessment (in contrast to division into semesters)
total study time	the total time required to study a module, unit or course, including all class contact, independent learning, revision and assessment
tutorial	one-to-one or small group supervision, feedback or detailed discussion on a particular topic or project
work/study placement	a planned period of experience outside the institution (for example, in a workplace or at another higher education institution) to help students develop particular skills, knowledge or understanding as part of their course
workload	see 'total study time'
written examination	a question or set of questions relating to a particular area of study to which candidates write answers usually (but not always) under timed conditions