**Template C4**



**Programme Specification**

**Title of Course:** *BSc (Hons) Biochemistry*

|  |  |
| --- | --- |
| Date first produced | 31/05/2012 |
| Date last revised | 25/09/2025 |
| Date of implementation of current version | 01/09/2025 |
| Version number | 11 |
| Faculty | Faculty of Health, Science, Social Care & Education |
| Cross-disciplinary |  |
| School | School of Life Sciences, Pharmacy and Chemistry |
| Department | Department of Biomolecular Sciences |
| Delivery Institution | Kingston University |

This Programme Specification is designed for prospective students, current students, academic staff and employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes and content of each modules can be found in the course VLE site and in individual Module Descriptors.

**SECTION 1:** **GENERAL INFORMATION**

|  |  |
| --- | --- |
| Award(s) and Title(s): | BSc (Hons) Biochemistry |
| Exit Award(s) and Title(s): | Cert HE Biochemistry  BSc Biochemistry  DipHE Biochemistry |
| Course Code  *For each pathway and mode of delivery* | UPBCH1BCH01  UFBCH1BCH01 |
| UCAS code  *For each pathway* | C700 (full-time), C701 (with placement), C708 (with foundation) |

|  |  |
| --- | --- |
| Award(s) and Title(s): | BSc (Hons) Biochemistry (with Professional Placement) |
| Exit Award(s) and Title(s): | Cert HE Biochemistry (with Placement)  BSc Biochemistry (with Placement)  DipHE Biochemistry (with Placement) |
| Course Code  *For each pathway and mode of delivery* | N/A  USBCH1BCH45 |
| UCAS code  *For each pathway* |  |

|  |  |
| --- | --- |
| Award(s) and Title(s): | BSc (Hons) Biochemistry (with Foundation Year) |
| Exit Award(s) and Title(s): | Cert HE Biochemistry (with Foundation Year)  BSc Biochemistry (with Foundation Year)  DipHE Biochemistry (with Foundation Year) |
| Course Code  *For each pathway and mode of delivery* |  |
| UCAS code  *For each pathway* |  |

|  |  |
| --- | --- |
| Awarding Institution: | Kingston University |
| Teaching Institution: | Kingston University |
| Location: | Penrhyn Road |
| Language of Delivery: | English |
| Delivery mode: |  |
| Learning mode(s): | Part-time  With Professional Placement |
| Minimum period of registration: | Part-time - 3  With Professional Placement - 4 |
| Maximum period of registration: | Part-time - 6  With Professional Placement - 8 |
| Entry requirements | Kingston University typically uses a range of entry requirements to assess an applicant's suitability for our courses. Most course requirements are based on UCAS Tariff points, usually stipulated as a range, and are sometimes coupled with minimum grades in specific relevant subjects. We may also use interview, portfolio and performance pieces to assess an applicant's suitability for the course. We recognise that every person's journey to Higher Education is different and unique and in some cases we may take into account work experience and other non-standard pathways onto University level study.  Additionally, all non-UK applicants must meet our English language requirements.  Please see our course pages on the Kingston University website for the most up to date entry requirements. |
| Regulated by | The University and its courses are regulated by the Office for Students |
| Programme Accredited by: | Royal Society of Biology |
| Approved Variants: | It is a professional and statutory regulatory body (PSRB) requirement (Royal Society of Biology) that the project (bioscience) module (LS6014) must be passed and cannot be compensated. |
| Is this Higher or Degree Apprenticeship course? | No |

**SECTION 2: THE COURSE**

1. **Aims of the Course**

* **Engage** students in the study of Biochemistry, providing a deep understanding of its fundamental principles and the intricacies of related fields.
* **Forster** the ability to independently seek out, evaluate, and synthesize primary and secondary literature, laying the groundwork for advanced independent study and a major research project at Level 6.
* **Demonstrate** a comprehensive suite of practical skills relevant to the subject, ensuring competence in gathering, analysing, interpreting, and presenting scientific data.
* **Offer** many opportunities for students to refine their communication skills, both in writing and orally.
* **Promote** the growth of independent learning abilities through engagement with a wide range of scholarly resources.
* **Equip** students for successful careers post-graduation, whether in research, further education, or lifelong learning, by enhancing their intellectual acumen, problem-solving capabilities, communicative prowess, numerical literacy, ICT proficiency, and practical and transferable skills.
* **Encourage** creativity and innovation, making them pertinent to professional environments.
* **Prepare** graduates with a versatile knowledge base and skill set, enabling them to thrive in scientific and non-scientific roles across various sectors.
* **Integrate** blended learning and artificial intelligence into the Biochemistry curriculum to enhance educational outcomes.

1. **Programme Learning Outcomes**

The programme learning outcomes are the high-level learning outcomes that will have been achieved by all students receiving this award. They have been aligned to the levels set out in [‘Sector Recognised Standards in England’ (OFS 2022).](https://www.officeforstudents.org.uk/media/53821cbf-5779-4380-bf2a-aa8f5c53ecd4/sector-recognised-standards.pdf%22)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Programme Learning Outcomes** | | | | | |
|  | **Knowledge and Understanding**  On completion of the course students will be able to: |  | **Intellectual Skills**  On completion of the course students will be able to |  | **Subject Practical Skills**  On completion of the course students will be able to |
| A8 | Demonstrate awareness of the career opportunities within biochemistry, or related subject areas | B7 | Work effectively in a team and play a full part in achieving its success | C4 | Evaluate, interpret, and present laboratory, experimental or field data to a professional standard |
| A7 | Use molecular biology techniques (including bioinformatics), and application of molecular genetics within biochemistry | B6 | Develop original ideas and communicate them well to others (in written, oral and digital form) | C3 | Be adept with the detailed and strict requirements of facilities and procedures used in biochemistry |
| A6 | Use bioanalytical techniques in biochemistry | B5 | Demonstrate the ability to be an independent autonomous learner | C2 | Select and perform in an efficient manner the techniques used widely in biochemistry |
| A5 | Apply health and safety procedures in the biochemical laboratory | B4 | Assemble and interpret data from a variety of sources (including academic literature) to discern and establish connections | C1 | Perform subject-related practical work safely and understand and comply with ethical and safety issues |
| A3 | Use information technology, databases and analytical tools in biochemistry | B3 | Plan, conduct and report on an individual research project |  |  |
| A2 | Demonstrate knowledge and understanding of the molecular basis of selected human diseases | B1 | Demonstrate the ability to critically evaluate and appraise information from both primary and secondary sources, and where appropriate integrate information from multiple sources |  |  |
| A1 | Demonstrate knowledge and understanding of the structure of the major classes of biochemical compounds and the relationship of these structural attributes to their function within a cell/organism | B2 | Apply subject knowledge and understanding to the solving of problems by using innovative methods |  |  |
| A4 | Understand the principles underpinning scientific research methodology |  |  |  |  |

1. **Future Skills Graduate Attributes**

In addition to the programme learning outcomes, the programme of study defined in this programme specification will engage students in developing their Future Skills Graduate Attributes:

1. Creative Problem Solving
2. Digital Competency
3. Enterprise
4. Questioning Mindset
5. Adaptability
6. Empathy
7. Collaboration
8. Resilience
9. Self-Awareness
10. **Outline Programme Structure**

canvas pages.

This programme is offered in a full-time or full-time with professional placement mode and leads to the award of BSc (Hons) Biochemistry.  Entry is normally at level 4 with A-level or equivalent qualifications (See section D).  Transfer from a similar programme is possible at level 5 with passes in comparable level 4 modules – but is at the discretion of the course team. Intake is normally in September.

Each level is made up of four modules each worth 30 credit points.  Typically, a student must complete 120 credits at each level or 90 credits with one 30 credits being trailed.  All students will be provided with the University regulations and specific additions that are sometimes required for accreditation by outside bodies (e.g. professional or statutory bodies that confer professional accreditation).  Full details of each module will be provided in module descriptors and student module guides.

Level 4 of the programme is designed to provide students with grounding in the biological and chemical principles of biochemistry, which are considered essential to underpin level 5 and 6 of the course. A Scientific and Laboratory Skills module equips students with the basics underlying the practical applications of the subject along with mathematics, statistics, and ICT skills. At level 5, students study four core modules that build upon the knowledge gained during level 4 to further develop their understanding of the molecular basis of biological systems and biochemical techniques. The module entitled Microbiology, Research Methods and Skills in addition develops students’ research skills, including communication, critical evaluation, and statistical analysis of data.

Level 6 of the course is comprised of a range of specialist modules that allow students to study selected biochemical topics in some depth, all of which are core. At level 6, students will conduct an original piece of independent research in a topic of their choice related to biochemistry. The biochemistry programme also integrates selected modules from the Department of Chemical & Pharmaceutical Sciences that highlight some of the processes utilised in the biochemical and pharmaceutical industries.

## BSc (Hons) Biochemistry

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Level 4** | | | | | | | |
| **BSc (Hons) Biochemistry** | | | | | | | |
| **Core modules** | **Module code** | **Credit**  **Value** | **Level** | **Teaching Block** | **Pre-requisites** | **Full Time** | **Part Time** |
| Chemical Foundations: From Atoms to Pharmaceuticals | CH4010 | 30 | 4 | Year long |  |  | 1 |
| Genes to Tissues | LS4014 | 30 | 4 | Year long |  |  | 1 |
| Introduction to Biochemistry | LS4015 | 30 | 4 | Year long |  |  | 1 |
| Scientific and Laboratory Skills | LS4003 | 30 | 4 | Year long |  |  | 1 |

Exit Awards at Level 4

Progression to level 5 requires completion of the core modules shown above.

This course permits progression from level 4 to level 5 with 90 credits at level 4 or above. The outstanding 30 credits from level 4 can be trailed into level 5 and must be passed before progression to level 6.

Students exiting the programme at this point who have successfully completed 120 credits are eligible for the award of Certificate of Higher Education.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Level 5** | | | | | | | |
| **BSc (Hons) Biochemistry** | | | | | | | |
| **Core modules** | **Module code** | **Credit**  **Value** | **Level** | **Teaching Block** | **Pre-requisites** | **Full Time** | **Part Time** |
| Analytical Techniques for Molecular Science | CH5014 | 30 | 5 | Year long |  |  | 2 |
| Microbiology, Research Methods and Skills | LS5030 | 30 | 5 | Year long |  |  | 2 |
| Molecular Biology of the Cell | LS5001 | 30 | 5 | 1 and 2 |  |  |  |
| Proteins and Metabolism | LS5002 | 30 | 5 | 1 and 2 |  |  |  |
| **Optional Modules** |  |  |  |  |  |  |  |
| Sandwich Year Placement | LS5000 | 120 | 5 | Minimum of 36 weeks throughout the year |  |  | 2 |

Exit Awards at Level 5

Progression to level 6 requires the completion of the core modules shown above.

This course permits progression from level 5 to level 6 with 90 credits at level 5. The outstanding 30 credits from level 5 can be trailed into level 6 and must be passed before consideration for an award.

Students exiting the programme at this point who have successfully completed 120 credits are eligible for the award of Diploma of Higher Education.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Level 6** | | | | | | | |
| **BSc (Hons) Biochemistry** | | | | | | | |
| **Core modules** | **Module code** | **Credit**  **Value** | **Level** | **Teaching Block** | **Pre-requisites** | **Full Time** | **Part Time** |
| Bioinformatics: Decoding Life’s Data | LS6036 | 30 | 6 | Year long |  |  | 3 |
| Bioscience Innovation and Enterprise | LS6044 | 15 | 6 | Year long |  |  | 3 |
| Clinical Biochemistry and Blood Science | LS6037 | 30 | 6 | Year long |  |  | 3 |
| Future Skills Apply | AX6001 | 15 | 6 | Year long |  |  | 3 |
| Project (Bioscience) | LS6014 | 30 | 6 | Year long |  |  | 3 |

Exit Awards at Level 6

Level 6 requires the completion of the core modules shown above.

\* It is a professional and statutory regulatory body requirement that the project (bioscience) module (LS6014) must be passed and cannot be compensated.

## BSc (Hons) Biochemistry (with Professional Placement)

## BSc (Hons) Biochemistry (with Foundation Year)

1. **Teaching, Learning and Assessment**

This course uses a range of teaching and assessment methods which have been designed to support students’ learning and achievement of the learning outcomes. The course has been developed with reference to the Kingston University Academic Framework which sets-out core principles relating to Course and Credit Structure (including Module delivery Structure and Pattern, and Learning Hours and Learning Formats); Curriculum Design (inclusion Learning Design Principles and Inclusive Curriculum); and Future Skills.

Teaching and Learning on the course consist of Scheduled Learning and Teaching and Guided Independent Study (self-managed time). Scheduled Learning and Teaching includes the following, and the format for each module is set out in the module specification:

* Laboratory Sessions
* Lectures
* Seminars
* Tutorials
* Workshops
* Placements

Guidance for students on the use of independent study time is communicated through the ‘Succeed in your module’ section on the Canvas Virtual Learning Environment and through other communications during the course.

In addition to the core Scheduled Learning and Teaching activities for the course, the University may offer students additional optional opportunities for learning. Examples of these include Study abroad and Work-based learning.

The course will provide students with the opportunity to develop their knowledge and skills relating to at least two United Nations Sustainable Development Goals (UN SDGs). We are committed to empowering students with the knowledge, skills and opportunities to understand and address the UN SDGs: each course is thus also required to prepare students for at least two of the SDGs (not including Quality Education, which all courses must deliver).

1. **Support for Students and their Learning**

Students are supported by:

* A Module Leader for each module
* A Course Leader to help students understand the programme structure
* Personal Tutors to provide academic advice and guidance, to build rapport between staff and students and contribute to personalising the students’ experience.
* A placement tutor to give general advice on placements
* Technical support to advise students on IT and the use of software
* A designated programme administrator
* An induction week at the beginning of each new academic session
* Staff Student Consultative Committee
* Canvas – a versatile on-line interactive intranet and learning environment
* A substantial Study Skills Centre that provides academic skills support
* Student support facilities that include student support officers provide advice on issues such as finance, regulations, legal matters, accommodation, international student support etc.
* Disabled student support
* The Students’ Union
* Careers and Employability Service

1. **Ensuring and Enhancing the Quality of the Course**

The University has policies and procedures for evaluating and improving the quality and standards of its provision. These include:

* Continuous Monitoring of courses through the Kingston Course Enhancement Programme (KCEP)
* Student evaluation including Module Evaluation Questionnaires (MEQs), the National Student Survey (NSS)
* Internal and external moderation of graded assignments

1. **External Reference Points**

External reference points which have informed the design of the course. These include:

* Royal Society of Biology (PRSB)
* QAA Subject benchmarks (Bioscience 2023)

1. **Development of Course Learning Outcomes in Modules**

This table maps where programme learning outcomes are **summatively** assessed across the **core** modules for this course. It provides an aid to academic staff in understanding how individual modules contribute to the course aims, a means to help students monitor their own learning, personal and professional development as the course progresses and a checklist for quality assurance purposes.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module Code** | | **Level 4** | | | | **Level 5** | | | | | **Level 6** | | | | | |
| **LS4003** | **CH4010** | **LS4014** | **LS4015** | **CH5014** | | **LS5030** | **LS5002** | **LS5001** | **LS6036** | | **LS6044** | **LS6014** | **LS6037** | **AX6001** |
| **Knowledge & Understanding** | A8 | S |  |  |  |  | |  | S |  |  | |  |  |  |  |
| A7 |  |  |  |  |  | |  |  | S |  | |  | S |  |  |
| A6 | S |  |  |  |  | |  | S |  |  | |  |  |  |  |
| A5 | S |  |  |  |  | |  | S | S |  | |  | S |  |  |
| A3 | S |  |  |  |  | |  | S |  |  | |  | S |  |  |
| A2 | S |  |  |  |  | |  | S | S |  | |  |  |  |  |
| A1 | S |  |  |  |  | |  | S |  |  | |  |  |  |  |
| A4 | S |  |  |  |  | |  | S | S |  | |  | S |  |  |
| **Intellectual Skills** | B7 | S |  |  |  |  | |  |  |  |  | |  |  |  |  |
| B6 | S |  |  |  |  | |  | S | S |  | |  | S |  |  |
| B5 | S |  |  |  |  | |  | S | S |  | |  | S |  |  |
| B4 | S |  |  |  |  | |  | S | S |  | |  | S |  |  |
| B3 |  |  |  |  |  | |  |  |  |  | |  | S |  |  |
| B1 | S |  |  |  |  | |  | S | S |  | |  | S |  |  |
| B2 |  |  |  |  |  | |  |  | S |  | |  | S |  |  |
| **Practical Skills** | C4 | S |  |  |  |  | |  | S | S |  | |  | S |  |  |
| C3 | S |  |  |  |  | |  | S |  |  | |  | S |  |  |
| C2 | S |  |  |  |  | |  | S |  |  | |  | S |  |  |
| C1 | S |  |  |  |  | |  | S |  |  | |  | S |  |  |

**Students will be provided with formative assessment opportunities throughout the course to practise and develop their proficiency in the range of assessment methods utilised.**

**Additional Information**

*Add information here about the number of approved entry points and for each one, except the first one, the delivery dates of the modules and which Teaching Block they’ll be delivered in. The details of the first entry point noted should be provided in the module tables above.*