

CU Group*
CU Coventry (CUC)
CU Scarborough (CUS)
CU London (CUL)

Course Specification
Part A

HNC Applied Biosciences
HND Applied Biosciences
B.Sc. (Hons) Applied Biosciences
CUCU039, CUSCU039, CUCLU039

CU Group*
Academic Year: 2019/2020

**CU Group refers to Coventry University College Limited, a company wholly-owned by Coventry University. Its trading names are CU Coventry, CU Scarborough and CU London*

Please note: This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided.

We regularly review our course content, to make it relevant and current for the benefit of our students. For these reasons, course modules may be updated.

More detailed information on the learning outcomes, content, and teaching, learning and assessment methods of each module can be found in the Module Information Directory (MID), student module guide(s) and the course handbook.

The accuracy of the information contained in this document is reviewed by the University and may be verified by the Quality Assurance Agency for Higher Education.

Revised November 2018

Template Revised August 2018

PART A Course Specification (Published Document)

Title of Course

1. Introduction

The biosciences study life at levels of organisation from chemicals, molecules and cells to the body, populations, communities and the environment. The emphasis throughout the course will be on the applied nature of the study of the biosciences in the understanding of the major causes of morbidity, mortality and sickness absence, and the significance of their prevention, management and treatment, with an emphasis on research and evidence based practice.

The Applied Biosciences course will equip autonomous scientists of the future – so learners know where and what to look for as they face scientific challenges and work-place challenges throughout the course and the optional placement year. The course contents, delivery style and assessments are designed to give a forum to apply and evaluate knowledge, theories and concepts of Biosciences to human body systems, with specific focus on the major causes of morbidity, mortality and sickness absence, equipping the learners with new skills for the workplace. The main aim of this course is to develop academic and practical skills, and knowledge in relation to a range of applied biosciences and in terms of how these can be applied to tangible vocational situations and problems. Learners will be able to put into practice new found knowledge, skills and behaviours, and apply all this in an employment setting during the optional placement year and in the future.

This all provides a platform from which learners may take multiple career or progression routes that include postgraduate qualifications. Bioscientists work all over the world in a wide variety of jobs and careers that require knowledge and application of science, from research to business and from regulation to teaching (The Science Council 2019). Settings include research and development laboratories (for example microbiology, marine science and immunology), biotechnology companies, classrooms, sales representatives and the food and drink industry. Many Bioscience graduates find employment within private or public sector research. This could be within university, government, NHS, commercial or charity-funded laboratories. Other opportunities for graduates are varied and include forensic analysis and environmental consultancy, scientific publishing, and secondary school teaching. Other less typical options include clinical trials and the traditional bio-industries such as brewing and food processing, as well as sales and marketing. This qualification is also acceptable to all schools of education for embarking on teacher training courses (Biology, Chemistry and Science). It may also stimulate a desire for additional learning after the course, which could take the form of a Masters or PhD level qualification such as: MSc Biotechnology, MSc Molecular Biology, MSc Pharmacology and Drug Discovery, as well as PhD, or further professional accreditation such as Chartered Scientist (CSci).

The course is comprised of 3 progressive levels; HNC (Level 4), HND (Level 5) and Honours degree (Level 6). The course in this way widens opportunities for students since it allows for entry and exit at each level. Furthermore, since the entry criteria are lower at HNC and HND, more students will be given the opportunity to study at an appropriate level rather than having to commit to full degree at the outset. There will also be the option to take a placement (sandwich) year in an employment setting. The Applied Biosciences degree course is designed as a progression route from the Foundation year in Applied Biosciences, and students that successfully complete the foundation year are able to progress onto the first level of the degree course. Students who successfully complete the HNC are able to progress onto the HND, and those who complete the HND will be able to progress onto the full honours degree.

2 Available Award(s) and Modes of Study

| Title of Award | Mode of attendance | UCAS Code | FHEQ Level |
|--------------------------------|---|-----------|------------|
| BSc (Hons) Applied Biosciences | F/T – 3 years, SW year – 4 years P/T – 3-4 years | | Level 6 |

| | | | |
|---|--|--|---------|
| HND Applied Biosciences | F/T – 2 years, P/T – 2-2.5 years, | | Level 5 |
| HNC Applied Biosciences | F/T – 1 year, P/T – 1-1.5 years | | Level 4 |
| 3 Awarding Institution/Body | Coventry University. | | |
| 4 Collaboration | N/A | | |
| 5 Teaching Institution and Location of delivery | CU Group | | |
| 6 Internal Approval/Review Dates | Date of approval/latest review: (2018/2019) Date for next review: (2026/2027) | | |
| 7 Course Accredited by | N/A | | |
| 8 Accreditation Date and Duration | N/A | | |
| 9 QAA Subject Benchmark Statement(s) and/or other external factors | Informed by QAA Subject Benchmark statements: Biosciences (2015), and Chemistry (2014). Course designed to meet professional body requirements of The Science Council (RSci), through Royal Society of Biology (RSB). | | |
| 10 Date of Course Specification | 01/2019 | | |
| 11 Course Director | Natasha Kinsmore | | |

12 Outline and Educational Aims of the Course

The biosciences are a wide and incredibly interesting area – this course provides an in-depth education in the biochemical, molecular, genetic and cellular activities of microorganisms and the human body, some of which is at the forefront of Biosciences.

With an emphasis on the applied aspects of the subject area, the course integrates technical, practical, problem solving and career relevant aspects. Technical competence is an essential component of the award, hence students are provided with ample opportunity to undertake hands-on experiments and exercises, including computer based activities, which not only underpin theory, but also deliver technical training.

Incorporated throughout the course at all levels are transferable skills which range from scientific researching and writing, numeracy and analysis, written and oral communication skills, to career and time management. These skills assist the student in successful completion of their studies and are valued by employers.

The award is supported technically by a comprehensive range of laboratory and practical equipment for the analysis and investigation of biological molecules, genetic and cellular activities of microorganisms and various functions of the human body.

In addition to this course aims to:

- Educate students in the theoretical and practical aspects of the biosciences that relate to the understanding of the major causes of morbidity, mortality and sickness absence, as well as to current and future employment needs.
- Develop student's proficiency in a range of areas relevant to the understanding of the major causes of morbidity, mortality and sickness absence, as well as to their current and future employment.
- Enhance the critical, analytical, problem solving skills required by the students in the understanding of the major causes of morbidity, mortality and sickness absence, as well as the workplace.
- Provide students with the skills to adapt and respond positively to new developments in the understanding of the major causes of morbidity, mortality and sickness absence, as well as the workplace.
- Produce graduates equipped with the skills to play an enhanced role in the Biosciences Industry, nationally and internationally.
- Instil in students the ability to manage their own learning, and undertake appropriate further training of a professional or equivalent nature.

The course has been designed with the intention of applying for accreditation with the Royal Society of Biology, so that students are eligible to apply for professional registration as a Registered Scientist (RSci) with the Science Council.

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13 Course Learning Outcomes

The HNC Applied Biosciences course aims to develop competent and safe learners by enabling students to:

1. Demonstrate knowledge and understanding of fundamental facts and theories associated with Applied Biosciences including: Biochemistry, Genetics, Cell & Molecular Biology, Microbiology, Anatomy and Physiology
2. Display knowledge and competence in introductory practical and experimental methods of acquiring information within Applied Biosciences (as above); as well as a basic understanding of their applications to the development of scientific knowledge and understanding
3. Exhibit an ability to gather, evaluate and interpret qualitative and quantitative data, in order to develop lines of argument and make sound judgements in accordance with basic theories and concepts of Applied Biosciences (as above)
4. Display knowledge of a range of communication techniques and methodologies relevant to Biosciences subjects

5. Present the results of their study/work accurately and reliably, and with structured and coherent arguments
6. Show qualities and transferable skills necessary for independent lifelong learning and employment requiring the exercise of some personal responsibility
7. Identify and undertake further training and develop new skills within a structured and managed environment

Augmenting the above, the HND Applied Biosciences course also aims to enable students to:

8. Develop in-depth knowledge and critical understanding of Applied Biosciences facts and theories, alongside the techniques and competence in advanced experimental methods
9. Critically appraise a range of established techniques to gather, interpret and critically analyse data, formulate arguments and make sound judgements, in accordance with the facts and theories, and propose solutions to problems As well as applying these concepts and principles outside the context in which they were first studied, including, an employment context
10. Effectively use communication techniques to communicate information, arguments and analysis in a variety of forms to specialist and non-specialist audiences and utilise key Applied Biosciences techniques effectively
11. Utilise the above qualities and transferable skills in decision-making, and the continued training, to further develop and acquire new skills and competences, to enable them to assume significant responsibility within organisations

Developing on from the above, the B.Sc. (Hons) Applied Biosciences course aims to enable students to:

12. Display advanced systematic knowledge and critical understanding of Applied Biosciences facts and theories, techniques, and competence in established experimental and theoretical research methods, some at the forefront of the discipline; as well as their applications to development knowledge and understanding, and to the careers which they may progress
13. Apply advanced methods and techniques, such as critical appraisal and analysis, and interpretation to enable comprehensive understanding of the subject area as a coherent whole, through study of texts, original papers, reports and data sets, some at the forefront of the discipline, to initiate and carry out projects
14. Demonstrate evidence of the skills and qualities necessary for sustained independent lifelong learning and employment, such as:
 - working independently, taking initiative and personal responsibility,
 - time management and organisation,
 - decision-making in complex and unpredictable contexts enterprise and knowledge transfer skills,
 - the learning ability needed to undertake appropriate further training of a professional or equivalent nature.

14 Course Structure and Requirements, Levels, Modules, Credits and Awards

Modules within the course, their status, the levels at which they are studied, their credit value and pre/co requisites are identified in the table below.

Patterns and modes of attendance.

The HNC/HND/BSc (Hons) Degree in Applied Biosciences can be undertaken in various modes and patterns of delivery.

The Full Time mode is designed for students who normally wish to study 120 credits (4 modules) in one academic year whereas the part time mode is the same number of modules or less delivered during weekends.

Students can attend via a number of delivery patterns which can be found on the relevant campus website. This may be weekdays or Saturdays. The length and set up of guided teaching sessions allows for teaching to be presented in various ways including team teaching, group discussions, individual presentations, research and presentation, interactive teaching and guest lecturers. The aim of each session is to have a balance between students learning academic practical and professional skills.

The course is taught in 6-week blocks and can be offered (subject to numbers and pre-requisites) 6 times each calendar year.

- 4 blocks/modules at level 4 will lead to an HNC (120 credits at level 4)
- 8 blocks/modules at level 5 will lead to an HND (240 credits at levels 4 and 5)
- 12 blocks/modules at level 6 will lead to an Honours degree (360 credits at levels 4, 5 and 6)

Each one of the learning blocks (modules) is worth 30 credits; these will require the equivalent of 300 study hours. The modules run over a six-week period and are taught consecutively, with assessments during and at the end of each block.

Professional Placement

Full time students may undertake an optional professional placement (SW) year between level 5 and 6 of the degree, which confers a depth of experience and enhances employability. It is recommended that students identify their own relevant professional placement. Assistance with acquiring a relevant professional placement is offered by the Employability Team, and where possible CU Group will arrange a placement for those students unable to do so, though no guarantee is made that such an opportunity will be found.

Students undertaking a relevant professional placement will be registered on the Professional Placement module during their placement year. Students who successfully complete the assessment associated with the relevant modules, assessed at the end of the year, will receive confirmation of this module at level 5 on their transcript.

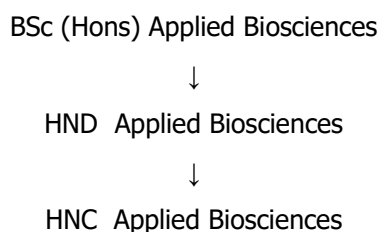
Students may undertake one of the following: a study abroad year under the Erasmus exchange scheme or another study abroad scheme for placements outside the EU; a professional placement under the Erasmus work placement scheme or a professional placement organised on their own initiative outside the EU. Alternatively, they may choose to combine a period of study with a period on professional placement.

To progress to the professional placement year a student will normally have accumulated 240 credits, 120 at level 4 and 120 at level 5.

All modules have been designed to meet the requirements of The Science Council (RSci); the Royal Society of Biology.

The course design also includes a significant component of work-based learning in the form of a placement/sandwich year; as well as incorporating professional training opportunities, specifically short courses around general professional laboratory, such as Institution of Occupational Safety and Health (IOSH) training, and employability training as well as route specific professional laboratory training.

Cascade of Awards:



To progress, normally students must have passed a minimum of 120 credits in all mandatory modules from the previous stage.

For an HNC Applied Biosciences award a student must have passed or been credited with all the mandatory modules at level 4 (120 credits).

For an HND Applied Biosciences award a student must have passed or been credited with all the mandatory modules at levels 4 and 5 (240 credits).

For a BSc in Applied Biosciences award a student must have passed or been credited with with 300 credits, to include 601SCI, 602SCI and 603SCI

For a BSc Hons in Applied Biosciences award a student must have passed or been credited with all mandatory modules at levels 4, 5 and 6 (360 credits).

The following table enables a holistic view of the learning outcomes and how the modules contribute to these. Total credits are within the maximum per level of study and module sizes are as defined in the academic regulations.

Modules within the course, their status (whether mandatory or options), the levels at which they are studied, and their credit value are identified in the table below.

| Credit level | Module Code | Title | Credit Value | Mandatory/Optional | Course Learning Outcomes |
|--------------|-------------|---|--------------|--------------------|--------------------------|
| 4 | 401SCI | Chemistry for Biosciences | 30 | M | 1-3, 5 & 7 |
| 4 | 402SCI | Introduction to Microbiology | 30 | M | 1-4, 6 & 7 |
| 4 | 403SCI | Applied Cell Biology | 30 | M | 1-7 |
| 4 | 404SCI | Introduction to Anatomy and Physiology | 30 | M | 1-6 |
| | | | | | |
| 5 | 501SCI | Advanced Cell and Molecular Biology | 30 | M | 8-11 |
| 5 | 502SCI | Principles of Biochemistry | 30 | M | 8-11 |
| 5 | 503SCI | Advanced Microbiology | 30 | M | 8-11 |
| 5 | 504SCI | Principles of Pathophysiology | 30 | M | 8-11 |
| 5 | 500CUG | <i>Professional Placement</i> | 0 | O | 9 & 11 |
| | | | | | |
| 6 | 601SCI | Applications of Biochemistry | 30 | M | 12-14 |
| 6 | 602SCI | Analysis and Applications of Cell and Molecular Biology | 30 | M | 12-14 |
| 6 | 603SCI | Applications of Pathophysiology | 30 | M | 12-14 |
| 6 | 604SCI | Applied Biosciences Project* | 30 | M | 12-14 |

*Students enrolling in blocks other than block 1 will receive additional support and guidance regarding completion of a project.

15 Criteria for Admission and Selection Procedure

UCAS entry profiles may be found by searching for the relevant course on the [UCAS website](#), then clicking on 'Entry profile'

The general requirements for admissions are in line with CU Group policy ([Academic Regulations: Regulations for the Admission of Students Chapter 2.3](#)), and are also available on the individual course websites.

All HNC/HND/Degree courses require at least two A2 level or a BTEC equivalent qualification, one of which should be a science based A level or equivalent, preferably Biology or Chemistry (others such as Physics or PE may be considered).

Applied Biosciences Higher National Certificate (HNC)

64 UCAS tariff points from at least two A2 level or a BTEC equivalent qualifications, one of which should be a science based A2 level or equivalent, preferably Biology or Chemistry (others such as Physics or PE may be considered). Also require 5 GCSEs at A-C including Maths and English, with a Science at B or above, preferably Biology or Chemistry (others such as Physics or PE may be considered).

Applied Biosciences Higher National Diploma (HND)

80 UCAS tariff points from at least two A2 level or a BTEC equivalent qualifications, one of which should be a science based A level or equivalent, preferably Biology or Chemistry (others such as Physics or PE may be considered). Also require 5 GCSEs at A-C including Maths and English, with a Science at B or above, preferably Biology or Chemistry (others such as Physics or PE may be considered).

Applied Biosciences (Biochemistry/Microbiology) BSc (Hons) Degree

104 UCAS tariff points from at least two A2 level or a BTEC equivalent qualifications, one of which should be a science based A level or equivalent, preferably Biology or Chemistry (others such as Physics or PE may be considered). Also require 5 GCSEs at A-C including Maths and English, with a Science at B or above, preferably Biology or Chemistry (others such as Physics or PE may be considered).

Foundation Year

This degree programme has an option to enter following successful completion of a Level 3 Foundation Year, so if you do not meet the entry requirements for the HNC, you may enter following successful completion of a foundation level. Successful completion of our [Applied Biosciences Sciences Foundation course](#) with an average grade of 50% or above throughout your Foundation year will guarantee you progression onto this degree programme.

Access Course

Successful completion of a [Health & Human Sciences Access to HE course](#) will guarantee you progression onto this degree programme.

Students whose first language is not English must demonstrate proficiency in the English language equivalent to IELTS 6 (Degree/Top Up - year 30 requires IELTS 6.5).

CU Group will also review applicants with non-standard entry requirements including those with professional work experience and direct entry applicants. Accredited prior learning and accredited prior experiential learning (AP(E)L) may be taken into consideration and mapped onto the entry criteria for the course. AP(E)L is in accordance with CU Group Academic Regulations (see [Academic Regulations: Regulations for the Admission of Students Chapter 2.2](#)).

Upon successfully meeting the entry criteria candidates may be asked to take part in a selection process.

16 Academic Regulations and Regulations of Assessment

This Course conforms to the standard [CU Group Academic Regulations](#) Mode F.

However, there is/are (number) of exception(s) to these regulations as listed below

If a student with a disability is likely to be prevented from achieving any of the intended learning outcomes, reasonable adjustments, where possible, will be made to the teaching learning and assessment methods to make achievement possible.

17 Indicators of Quality Enhancement

The course is managed by the Health and Life Sciences Board of Study of the CU Group.

The Joint Assessment Board (JAB) for CU Group is responsible for considering the progress of all students and making awards in accordance with both the CU Group and course-specific regulations.

The assurance of the quality of modules is the responsibility of the Boards of Study which contribute modules to the course.

External Examiners have the opportunity to moderate all assessment tasks and a sample of assessed work for each module. They will report annually on the course and/or constituent modules and their views are considered as part of

the Course Quality Enhancement Monitoring (CQEM). Details of the CQEM process can be found on the Registry's web site.

Students are represented on the Student Forum, Board of Study and CU Group Academic Committee, all of which normally meet two or three times per year.

Student views are also sought through module and course evaluation questionnaires.

The following are key indicators of quality and standards:

1. The course has been designed in accordance with the QAA Subject Benchmark Statement for Biosciences (November 2015) and Chemistry (December 2014) and has been mapped to the Royal Society of Biology accreditation matrix. All staff who teach on the course are active in scholarship/research and have a range of professional experience in biosciences, Master's or PhD qualifications in a relevant subject and years of teaching experience in higher education.
2. The record of graduates gaining employment in the scientific industry is excellent (85% employed either in a relevant profession or in further education within 6 months of graduating in 2017).
3. External Examiners report annually on the programme and their views are considered as part of the annual course quality and enhancement monitoring process (CQEM).
4. Student views are also sought through module and course evaluation questionnaires, with current overall satisfaction at 92% on the BSc Biological and Chemical sciences.
5. All programmes are subject to a major review involving subject experts external to the University Group and normally on a 9 year cycle. At these reviews the views of current and former students, and partners from private, public and the third sectors are sought where appropriate.
6. The QAA's review of higher education undertaken in February 2015 confirmed that Coventry University meets UK expectations in:
 - the setting and maintenance of the academic standards of its awards;
 - the quality of student learning opportunities;
 - the quality of the information about learning opportunities;
 - the enhancement of student learning opportunities.

18 Additional Information

Enrolled students have access to additional, key sources of information about the course and student support including,

- CU Group Student Handbook
 - Course Moodle page
 - Individual Module Moodle pages
 - Module Information Directory- Study Support information
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