

KEY PROGRAMME INFORMATION

Originating institution(s) Bournemouth University	Faculty responsible for the programme Faculty of Science and Technology
Final award(s), title(s) and credits BSc (Hons) Biomedical Science 120 (60 ECTS) Level 4 / 120 (60 ECTS) Level 5 / 120 (60 ECTS) Level 6 credits	
Intermediate award(s), title(s) and credits Dip HE Biological Sciences – 120 (60 ECTS) Level 4 / 120 (60 ECTS) Level 5 credits Cert HE Biological Sciences – 120 (60 ECTS) Level 4 credits	
UCAS Programme Code(s) (where applicable and if known) B940	HECoS Codes and percentage split per programme / pathway 100270
External reference points <ul style="list-style-type: none"> • UK Quality Code for Higher Education; • Part A: Setting and maintaining academic standards; • Chapter A1: UK and European reference points for academic standards (October 2013); • Subject benchmark - Biomedical Sciences and Biomedical Sciences (2023); • Accreditation standards of Institute of Biomedical Science. 	
Professional, Statutory and Regulatory Body (PSRB) links The Institute of Biomedical Science (IBMS)	
Places of delivery Bournemouth University	
Mode(s) of delivery Full-time Full-time Sandwich Part-time	Language of delivery English
Typical duration Full-time – 3 years (1 year for each level) Part-time – 6 years (2 years for each level) Full-time with Sandwich Placement – 4 years (1 year for each level)	
Date of first intake September 2023	Expected start dates September
Maximum student numbers N/A	Placements Optional 30 week placement to take place between Level 5 and 6
Partner(s) – Not applicable	Partnership model Not applicable
Date of this Programme Specification November 2024	
Version number v2.4-0925	
Approval, review or modification reference numbers E212218 EC 2223 02 EC 2223 11 EC 2223 32 FST 2223 17, approved 15/03/2023, previously v2.0-0923 EC232407, approved 15/11/2023 FST2324 10, approved 22/11/2023, previously v2.1 EC2324 12, approved 31/01/2024 FST2324 21, approved 12/03/2024, previously 2.2 FST2425 08, approved 27/11/2024, previously v2.3	
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PROGRAMME STRUCTURE

Programme Award and Title: BSc (Hons) Biomedical Science

Year 1/Level 4

Students are required to complete all 6 core units.

Unit Name	Core/ Option	No of credits	Assessment Element Weightings				Expected contact hours per unit	Unit version no.	HECoS Code(s)
			Exam 1	Exam 2	Cwk 1	Cwk 2			
Exploring and Understanding Science	Core	20	30		70		20	v1.0	100270
Biomedical Laboratory Science	Core	20	50		50		40	v1.1	100417
Human Anatomy and Physiology	Core	20	50	50			40	v1.3	100350
Cell Biology	Core	20	30		70		40	v2.0	100822
Human Genetics and molecular biology	Core	20	50		50		40	v1.1	100900
Introduction to Immunology	Core	20	100				40	v2.0	100911

Progression requirements: Requires 120 credits at Level 4.

Exit qualification: Cert HE Biological Sciences (requires 120 credits at Level 4)

Year 2/Level 5

Students are required to complete all 6 core units

Unit Name	Core/ Option	No of credits	Assessment Element Weightings				Expected contact hours per unit	Unit version no.	HECoS Subject Code and %
			Exam 1	Exam 2	Cwk 1	Cwk 2			
Blood Sciences	Core	20	50		50		40	v1.1	100265
Biochemistry	Core	20	50	50			40	v2.0	100343
Introduction to Pharmacology and Toxicology	Core	20	50		50		40	v2.1	100250
Infection Sciences and Clinical Immunology	Core	20	50		50		40	v2.1	100911
Advanced Cell Biology	Core	20			50	50	40	v2.0	100822
Mechanisms of Human Pathology	Core	20			50	50	40	v1.0	100276

Progression requirements: Requires 120 credits at Level 5.

Exit qualification: Dip HE Biological Sciences (requires 120 credits at Level 4 and 120 credits at Level 5)

Optional Placement Year in industry

Successful completion of an optional 30-week placement taken between levels 5 and 6 (full time only).

Progression requirements satisfactory completion of at least 30 weeks of work in an optional placement. Students who do not choose to undertake the optional placement may progress directly from Level 5 to Level 6.

Year 3/4/Level 6

Students are required to complete 5 core units (including 40 credit Independent Research Project), and 1 optional units. Option choice may be constrained by the semester in which units are delivered.

Unit Name	Core/ Option	No of credits	Assessment Element Weightings			Expected contact hours per unit	Unit version no.	HECoS Subject Code and %	
			Exam 1	Cwk 1	Cwk 2				
Independent Research Project	Core	40		100		12	v2.0	100270	
Pathophysiology	Core	20	50	50		40	v2.0	100350	
Advanced Topics in Genetics	Core	20	50	50		40	v2.0	100259	
Advanced Systems Biology	Option	20		100		40	v2.0	100865 (50%)	100869 (50%)
Advanced Pharmacology and Toxicology <i>[Pre-requisite L5 Introduction to Pharmacology and Toxicology or L5 Introduction to Pharmacology]</i>	Option	20		50	50	40	v2.1	100250 (50%)	100277 (50%)
Diagnostic Medicine	Core	20	50	50		40	v1.0	100265 (70%)	100129 (30%)
Parasitology and Epidemiology	Option	20		50	50	40	v2.0	100826	

Exit qualification: BSc (Hons) Biomedical Science

UG award: Requires 120 credits at Level 4, 120 credits at Level 5 and 120 credits at Level 6.

Full-time Sandwich UG award: Requires 120 credits at Level 4, 120 credits at Level 5, 120 credits at Level 6 and successful completion of 30-week placement.

AIMS OF THE DOCUMENT

The aims of this document are to:

- define the structure of the programme;
- specify the programme award titles;
- identify programme and level learning outcomes;
- articulate the regulations governing the awards defined within the document.

AIMS OF THE PROGRAMME

This programme aims to develop highly employable graduates, who:

- be able to practice safely and effectively within their scope of practice, have expertise and knowledge in the areas of biomedical science and communicate these appropriately;
- have expertise in clinical laboratory skills as they are applied to biomedical science and to practice them legally, safely and effectively;
- are highly trained in independent biomedical research and clinical practice, understand the importance of continuing professional development and maintaining high standards of proficiency;
- are critically aware of the wider application of biomedical science to address society's needs and the ethical implications of their practice. Understand the need for sustainability in Biomedical Science the importance of the United Nations sustainable development goal for good health and wellbeing.

Biomedical science is a rapidly growing area of study, reflected by the greatly increased number of biomedical science degrees within the UK over recent years. Graduates from these degrees have advanced skills that make them highly employable within a diverse range of organizations in the public or private sector. This programme is structured so that it specifically aligns to all the subject areas assessed by the Institute of Biomedical Science (IBMS), the accrediting body and the Health Care Professions Council (HCPC) so graduates from this degree will be proficient in all assessed Biomedical areas needed for professional qualifications.

The programme is aligned tightly to the quality benchmark for Biomedical Science through its core units. It is designed to align with the current broad Biomedical Science areas of Blood Science, Cellular Science, Tissue Pathology, Infections and Molecular Science using an integrated approach. Within these broader areas, specific content is included that is essential for a Biomedical Science degree: Anatomy and Physiology; Cell Biology; Biochemistry; Genetics; Molecular Biology; Pathology; Bioinformatics; Microbiology; Immunology and Pharmacology;

ALIGNMENT WITH THE UNIVERSITY'S STRATEGIC PLAN

This programme aligns with the university's key strategic investment area of medical science, as part of its BU 2025 strategy plan. Investment is on-going and will encompass research, education and professional practice across a range of health / biomedical, scientific and technological areas. This investment will complement the broad range of biomedical-related expertise already spread across the University. Biomedical science forms an important component of the BU vision that indicates that it can be used to support/ inform/ improve human health care and medicine.

LEARNING HOURS AND ASSESSMENT

Bournemouth University taught programmes are composed of units of study, which are assigned a credit value indicating the amount of learning undertaken. The minimum credit value of a unit is normally 20 credits, above which credit values normally increase at 20-point intervals. 20 credits is the equivalent of 200 study hours required of the student, including lectures, seminars, assessment and independent study. 20 University credits are equivalent to 10 European Credit Transfer System (ECTS) credits.

Programme Specification - Section 2

The assessment workload for a unit should consider the total time devoted to study, including the assessment workload (i.e. formative and summative assessment) and the taught elements and independent study workload (i.e. lectures, seminars, preparatory work, practical activities, reading, critical reflection).

Assessment per 20 credit unit should normally consist of 3,000 words or equivalent. Dissertations and Level 6 Final Projects are distinct from other assessment types. The word count for these assignments is 5,000 words per 20 credits, recognising that undertaking an in-depth piece of original research as the capstone to a degree is pedagogically sound.

STAFF DELIVERING THE PROGRAMME

Students will be taught by a combination of senior academic staff with others who have relevant expertise including – where appropriate according to the content of the unit – academic staff, qualified professional practitioners, demonstrators/technicians and research students.

INTENDED LEARNING OUTCOMES – AND HOW THE PROGRAMME ENABLES STUDENTS TO ACHIEVE AND DEMONSTRATE THE INTENDED LEARNING OUTCOMES

PROGRAMME AND LEVEL 6 INTENDED PROGRAMME OUTCOMES

A: Subject knowledge and understanding This programme provides opportunities for students to develop and demonstrate knowledge and understanding of:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme learning outcomes:
A1 Theories, concepts and principles relevant to a range of different fields within biomedical science;	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): <ul style="list-style-type: none">• lectures (A1 – A5);• seminars (A1 – A5);• directed reading (A1 - A3);• use of the VLE (A1-A5);• tutorials and research project (A1-A5).
A2 The wider application of biomedical science to address societal needs as well as contemporary and emerging issues in the field;	
A3 The limitations of current knowledge and practice, and the role of research in addressing these limitations;	Assessment strategies and methods (referring to numbered Intended Learning Outcomes): <ul style="list-style-type: none">• Examinations including practical examinations (A1-A3);• coursework including written and oral assessments (A1 – A5);• research project (A1-A5).
A4 The moral and ethical dimensions of their professional actions and investigations and the need for ethical standards and professional codes of conduct.	
A5 The role and impact of intellectual property within a research environment	
B: Intellectual skills This programme provides opportunities for students to:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme outcomes:
	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):

Programme Specification - Section 2

B1 Develop skills to critically evaluate relevant scientific knowledge to understand how evidence-based decisions may be made in biomedical sciences;	<ul style="list-style-type: none"> lectures (B1 – B3); seminars (B1 – B4); directed reading (B1 – B4); use of the VLE (B2 – B4); tutorials and research project (B1 – B4).
B2 Develop skills to obtain and integrate relevant evidence from a range of sources to formulate and test hypotheses;	<p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> examinations (B1- B3); coursework (B1 – B3); research project (B1 – B4).
B3 Analyze how familiar and unfamiliar problems can be addressed using subject knowledge and understanding ;	
B4 Plan, execute and report on original or directed research of relevance to biomedical sciences.	
C: Practical skills This programme provides opportunities for students to:	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme/level learning outcomes:</p>
C1 Identify and use appropriate laboratory and other practical techniques in a responsible, safe and ethical manner (includes awareness of quality management; animal welfare and informed consent);	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> lectures, seminars and tutorials (C1 – C4); practical and laboratory teaching (C1-C4); tutorials and research project (C1-C4)
C2 Conduct and interpret biomedical science research and report this in a range of formats;	
C3 Make effective use of academic literature, databases and other relevant information;	<p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> examinations (C3); coursework (C1 – C4); research project (C1-C4).
C4 Make effective use of IT relevant to the discipline.	
D: Transferable skills This programme provides opportunities for students to:	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme learning outcomes:</p>
D1 Communicate effectively by oral, written and visual means;	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> lectures (D1 – D3); seminars and tutorials (D1- D5); use of the VLE (D1 - D5); directed reading (D1, D3, D5).
D2 Use digital technology with competence including a wide-range of software packages;	
D3 Solve numerical problems and understand the application and interpretation of statistical analyses of data;	<p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> coursework (D1 - D5); examinations (D1, D3, D5); research project (D1- D5).
D4 work in collaboration with others with a professional manner;	
D5 manage their own motivation, tasks and behaviour in enterprising, innovative and professionally appropriate ways - working towards personal, career and academic development.	

LEVEL 5/DipHE INTENDED LEVEL OUTCOMES

<p>A: Knowledge and understanding</p> <p>This level provides opportunities for students to develop and demonstrate knowledge and understanding of:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level learning outcomes:</p>
<p>A1 Fundamental principles and concepts relevant to biomedical sciences and its applications.</p> <p>A2 An introduction to pharmacology and to toxicology or anatomy;</p> <p>A3 Advanced understanding of biochemistry, immunology and cell biology;</p> <p>A4 Theoretical and practical knowledge for the areas of clinical microbiology and clinical biochemistry</p> <p>A5 The complexity and uncertainties within the field of biomedical sciences.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> lectures (A1- A5); tutorials and seminars (A1 – A5); directed reading (A1-A5); use of the VLE (A1-A5). <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> examinations (A1-A5); coursework (A1 – A5).
<p>B: Intellectual skills</p> <p>This level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level learning outcomes:</p>
<p>B1 Develop skills to evaluate and use information and data sets appropriate to biomedical sciences;</p> <p>B2 Applying key knowledge and concepts to biomedical problem solving;</p> <p>B3 Develop skills in selecting and using analytical techniques;</p> <p>B4 Develop skills in synthesising and integrating scientific knowledge.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> lectures (B1 - B4); tutorials and seminars (B1 – B4); directed reading (B1 – B4); use of the VLE (B2 – B4). <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> examinations (B2 - B4); coursework (B1 – B4). research project (B1 – B4).
<p>C: Practical skills</p> <p>This level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level learning outcomes:</p>
<p>C1 Continue to develop safe and responsible laboratory skills across a range of techniques;</p> <p>C2 Become proficient in obtaining, citing and referencing materials including literature and published data relevant to biomedical sciences;</p> <p>C3 Learn fundamental techniques for data analysis, reporting and interpretation.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> lectures (C2 - C3); tutorials and seminars (C1 – C4); practical (C1-C4) <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> examinations (C2, C3)

Programme Specification - Section 2

C4 Learn to use software relevant to the discipline.	<ul style="list-style-type: none"> coursework (C1, -C4).
D: Transferable skills This level provides opportunities for students to:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level learning outcomes:
D1 Further develop abilities in effective communication by oral, written and visual means; D2 Develop skills in a range of digital technologies; D3 Gain confidence and skills in a range of methods for data analysis and interpretation; D4 Learn to work independently and in groups with an active and reflective approach to their studies. D5 Manage their own motivation, tasks and behaviour in enterprising, innovative and professionally appropriate ways - working towards personal, career and academic development.	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): <ul style="list-style-type: none"> lectures (D1 – D5); tutorials and seminars (D1- D5); use of the VLE (D1 – D5). Assessment strategies and methods (referring to numbered Intended Learning Outcomes): <ul style="list-style-type: none"> coursework (D1 – D5); examinations (D1, D3).

LEVEL 4/Cert HE INTENDED LEVEL OUTCOMES

A: Knowledge and understanding This level provides opportunities for students to develop and demonstrate knowledge and understanding of:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level learning outcomes:
A1 A basic knowledge of cell chemistry and biology to underpin requirements of Level 5 units; A2 A foundation in human anatomy and physiology, immunology and clinical genetics; A3 A basic understanding of sampling, investigative and clinical and research laboratory techniques; A4 An appreciation and basic knowledge of a range of techniques for quantitative analysis and interpretation of data in biomedical sciences. A5 The complexity and uncertainties within the field of biomedical sciences.	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): <ul style="list-style-type: none"> lectures (A1- A5); tutorials and seminars (A1 – A5); directed reading (A1- A5); use of the VLE (A1-A5). Assessment strategies and methods (referring to numbered Intended Learning Outcomes): <ul style="list-style-type: none"> examinations (A1, A2); coursework (A1 – A5).
B: Intellectual skills This level provides opportunities for students to develop:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level learning outcomes:

Programme Specification - Section 2

<p>B1 Basic ability to identify and use appropriate sources of information;</p> <p>B2 Basic awareness of the scientific method;</p> <p>B3 Their ability to critically evaluate data and other evidence;</p> <p>B4 Their ability to analyse and interpret information.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> lectures (B1 - B4); tutorials and seminars (B1 – B4); directed reading (B1 – B4); use of the VLE (B1 – B4). <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> examinations (B2 - B4); coursework (B1 – B4).
<p>C: Practical skills</p> <p>This level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level learning outcomes:</p>
<p>C1 Develop safe laboratory skills relevant to biomedical sciences;</p> <p>C2 Learn how to obtain relevant literature and published data and how to cite and reference this appropriately;</p> <p>C3 Develop underpinning skills in data handling and display;</p> <p>C4 Learn basic skills in data analysis and selection of suitable statistical tools relevant to the discipline.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> Lectures (C1 – C4); Practicals (C1-C4); Tutorials and seminars (C1- C4) <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> coursework (C1 – C4).
<p>D: Transferable skills</p> <p>This level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:</p>
<p>D1 Develop skills and confidence in effective communication by oral, written and visual means;</p> <p>D2 Develop abilities in use of digital technology;</p> <p>D3 Basic understanding and abilities in the application and interpretation of data analysis;</p> <p>D4 Develop as independent, active and reflective learners.</p> <p>D5 Manage their own motivation, tasks and behaviour in enterprising, innovative and professionally appropriate ways - working towards personal, career and academic development.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> lectures (D1 – D3); tutorials and seminars (D1- D5); use of the VLE (D1 – D5); directed reading (D1- D5). <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> coursework (D1 – D5); examinations (D1, D3, D4).

ADMISSION REGULATIONS

Please refer to the BU website for further information regarding admission regulations for this programme. <https://www.bournemouth.ac.uk/study/courses/bsc-hons-biomedical-science-0>

PROGRESSION ROUTES

Partnership arrangements provide formally approved progression routes through which students are eligible to apply for a place on a programme leading to a BU award.

ASSESSMENT REGULATIONS

The regulations for this programme are the University's [Standard Undergraduate Assessment Regulations \(6A\)](#) with the following approved exceptions to clauses 6.1, 7.1 and 7.2 which align the programme with the requirements of the Institute of Biomedical Science (IBMS):

Pass Mark

The pass mark for each core unit will be 40%. Where a core unit is assessed by more than one formal element, the mark for each formal element of assessment will not be less than 40%.

Compensation

Compensation does not apply to any Core units.

The following approved exception to the Principles of Assessment Design: Policy (6C) applies which aligns the programme with the requirements of the Institute of Biomedical Science (IBMS):

Exams with no invigilation and/or open book exams at home are not allowed.

WORK BASED LEARNING (WBL) AND PLACEMENT ELEMENTS

The programme will include an optional 30-week placement year in the third year of study. Those students who successfully complete the one-year placement will be eligible for the award of full-time sandwich degree. Long rather than short placements are more typical on related degrees across the sector. Students with long placements in an IBMS accredited laboratory may have the option to complete the IBMS Registration Training Portfolio. Students with completed IBMS training portfolio can apply for the IBMS Certificate of Competence after graduation, which confers eligibility to register with the Health Care Professionals Council (HCPC) as a biomedical scientist.

Programme Skills Matrix

Units		Programme Intended Learning Outcomes																	
		A 1	A 2	A 3	A 4	A 5	B 1	B 2	B 3	B 4	C 1	C 2	C 3	C 4	D 1	D 2	D 3	D 4	D 5
L6	Independent Research Project	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
L6	Pathophysiology	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
L6	Advanced Topics in Genetics	X	X	X	X	X	X	X	X	X			X	X	X	X		X	X
L6	Advanced Systems Biology	X		X		X	X	X	X				X	X	X	X	X		X
L6	Advanced Pharmacology and Toxicology	X	X	X	X		X	X		X			X	X		X	X	X	X
L6	Diagnostic Medicine	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X
L6	Parasitology and Epidemiology	X	X	X	X		X	X	X		X	X	X			X	X	X	X
L5	Blood Sciences	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L5	Biochemistry	X		X	X		X	X	X		X	X	X	X	X	X		X	
L5	Introduction to Pharmacology and Toxicology	X	X			X	X	X	X	X		X	X		X		X	X	
L5	Infection Sciences and Clinical Immunology	X	X	X			X		X	X	X	X		X	X			X	
L5	Advanced Cell Biology			X			X	X			X	X			X			X	
L5	Mechanisms of Human Pathology	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L4	Exploring and Understanding Science			X	X	X	X	X	X	X		X	X	X	X	X	X	X	
L4	Biomedical Laboratory Science	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L4	Human Anatomy and Physiology		X				X		X			X			X		X	X	
L4	Cell Biology	X		X	X			X	X	X	X		X	X	X	X	X	X	
L4	Human Genetics and Molecular biology	X	X	X		X	X	X			X	X			X	X		X	
L4	Introduction to Immunology	X	X	X			X	X			X	X			X	X		X	