Prifysgol Wrecsam
Wrexham University

PROGRAMME SPECIFICATION

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Award titles

Programme Title(s)

BSc (Anrh) Gwyddoniaeth Biofeddygol

BSc (Hons) Biomedical Science

Internal Programme Title(s) (if different to the title on the certificate)

Programme to be included in Graduation Ceremonies
Yes

Delivery period

September 21-25

Intake points

September intake

Regulatory details

Regulatory details
Awarding body
Wrexham University
Programme delivered by
Wrexham University Betsi Cadwaladr University Health Board (BCUHB), North Wales Clinical Research Centre (NWCRC)
Location of delivery
Plas Coch Campus, Wrexham BCUHB North Wales Clinical Research Centre (based at Wrexham Maelor Hospital and is a registered UKVI site affiliated with WGU)
Faculty/Department
Faculty of Social and Life Sciences Faculty of Arts, Science and Technology
Exit awards available
BSc (Ord) Biomedical Science Diploma of Higher Education in Biomedical Sciences Certificate of Higher Education in Biomedical Sciences
Professional, Statutory or Regulatory Body (PSRB) accreditation
BSc (Hons) Biomedical Science full-time and part-time programmes are accredited by Institute of Biomedical Science for student intakes 2021 to 2025 inclusive.

Please add details of any conditions that may affect accreditation (e.g. is it dependent on choices made by a student?) *e.g. completion of placement.*
Students must complete all of the modules (i.e. taught and research dissertation) to gain IBMS accreditation for the BSc in Biomedical Science.
HECoS codes
100265
UCAS code
B900
Relevant QAA subject benchmark statement/s
Biomedical Science (October, 2019): Link to QAA Subject Benchmark Statements – Biomedical Sciences New module SCI552 Applied and Medical Microbiology mapped to 2023 QAA Subject Benchmark Statements
Mode of study
Full & part time
Normal length of study for each mode of study
FULL TIME 3 year Bachelor's Degree 4 year Bachelor's with foundation year PART TIME Part time delivery is over 6 years and students take 60 credits per year. Chosen module delivery is offered jointly with full time delivery.
Language of study
English
Transitional arrangements for re-validated provision if applicable
N/A
The following University Award Regulations apply to this programme (*highlight the appropriate ones and delete the others)*
General Regulations and Definitions Regulations for Bachelor Degrees, Diplomas, Certificates and Foundation Degrees

OFFICE USE ONLY	
Date of validation event:	24 June 2020
Date of approval by Academic Board:	21 April 2021
Approved Validation Period:	Five years from September 2021
Transitional arrangements approved (if revalidation)	*Enter details from section 3 following validation event confirming what arrangements are*
Date and type of revision:	27/07/2022 APSC approval to replace HLT417 with HLT427 01/08/2023 APSC approval to replace SCI550 with SCI552 from Sept 2023 onwards and derogation update Sept 23 Replacement of SCI448 with SCI458 during the BSc Forensic Science revalidation. Dec 2024 – AM0 wording change Section 12. May 2025 – Admin correction SCI442 assessment.

1 Criteria for admission to the programme

Standard entry criteria

Entry requirements are in accordance with the University's admissions policy, please click on the following link for more information. Admissions policies

The University's entry requirements are set out on our Admissions webpages

Qualification	Entry requirements
Foundation Year	48 Tariff points and /or relevant experience
3 year Bachelors degree	112 Tariff points

These figures are intended as a general guide. Each application is considered individually.

International entry qualifications are outlined on the National Academic Recognition and Information Centre (NARIC) as equivalent to the relevant UK entry qualification.

In addition to the academic entry requirements, all applicants whose first language is not English or Welsh must demonstrate English language proficiency.

European students are able to provide this evidence in a number of ways (please see http://www.glyndwr.ac.uk/en/Europeanstudents/entryrequirements/ for details), including IELTS.

International students are required to provide an English Language Certificate which meets the requirements of the University *(please see http://www.glyndwr.ac.uk/en/Internationalstudents/EntryandEnglishLanguageRequirements/ for details).*

Non Standard entry criteria
N/A

2 Record of Prior (Experiential) learning

Applicants may enter the programme at various levels with Recognition of Prior Learning (RPL) or Recognition of Prior Experiential learning (RPEL) in accordance with the University General Regulations.

3 DBS Requirements

Details of regulated activity with children: None

Details of regulated activity with adults: None

Details of regulated activity with children and adults: None
Clinical assessments, learning to prescribe medications: None

Date of commencement of regulated activity: N/A

4 Suitability for Practice Procedure

Not applicable.

5 Aims of the programme

The overall aims of the Biomedical Science programme are to:

- Facilitate a widening of access to higher education within the local community and beyond through flexibility in admissions procedures and learning and teaching styles.
- Offer undergraduate awards promoting academic, vocational and personal development.
- Provide a coherent and challenging learning experience for students who have an interest in Biomedical Science.
- Offer attractive and flexible learning opportunities to full-time and part-time students.
- Encourage a critically and theoretically informed and reflective approach to academic study and professional practice.
- Foster a critical appreciation of the role and value of research and of a scientific approach to study.
- Optimise the use of learning resources by providing opportunities for shared learning for students undertaking related programmes.
- Increase self-awareness and insight into both professional and ethical issues relevant to the practice of Biomedical Science.
- Advances professional practice to benefit healthcare services and professions related to Biomedical Science.
- Develops specific knowledge and competence that underpins Biomedical Science.

Specifically, the programme will equip/provide students with:

- The study of Biomedical Sciences, which underpins professional development.
- A sound level of scientific knowledge of disease processes, which underpin diagnosis and health.
- Informed and critical appreciation of scientific development in relation to diagnostic laboratory pathology.
- In depth knowledge of the subject area through a research dissertation.
- Sound understanding of professional practice to benefit healthcare services and professions related to the practice of Biomedical Science.
- Scientific and research training appropriate for Level 6.

6 Distinctive features of the programme

The BSc(Hons) Biomedical Science course has been thoughtfully developed to provide a rich and dynamic student experience throughout the duration of the programme. Whilst it sits within the Faculty of Social and Life Sciences, a number of programme team members involved in module delivery are based in the Faculty of Arts, Science and Technology. This cross-faculty arrangement enables students to benefit from tutors with expertise ranging from the physical and natural sciences (chemistry and biology) through to healthcare sciences. Content has been carefully aligned with the requirements of the Institute of Biomedical Science, with whom the course is accredited.

Additionally, the programme is delivered in close collaboration with the local Betsi Cadwaldr University Health Board (BCUHB), and builds on the success of an existing collaboration co-delivering a range of Postgraduate (PG) programmes in the Biomedical, Clinical and Healthcare Sciences. For this undergraduate provision, the collaboration will ensure that students have an authentic and contemporary education within real biomedical settings, embedded throughout the programme.

Staff from the North Wales Clinical Research Centre (NWCRC) within BCUHB have collaborated closely with academics from Wrexham University in design of the programme.

The NWCRC is based at Wrexham, opposite the Wrexham Maelor Hospital. It comprises of research laboratories, housing state of the art equipment, such as flow cytometry, fluorescence microscopy and molecular analysers. It also includes clinical suites for undertaking non-laboratory based research, hot desk facilities offices, meeting and seminar rooms. There are a number of opportunities for students enrolled on the BSc (Hons) Biomedical Science programme to undertake work within the NWCRC laboratories, particularly in the second year of the programme where they will undertake a five week block of laboratory based work, engaging with researchers and biomedical scientists employed within BCUHB.

The BSc (Hons) Biomedical Science framework offers a flexible programme with named routes to cater for the learning and personal/professional development needs of students wishing to work within a biomedical, clinical and healthcare perspective. The programme is distinctive in that it provides a balance of generality and specificity of content to cater for a wide range of student educational needs. It seeks to encourage inter-professional practice by being open to students within an academic community. The programme is taught by a highly experienced team of biomedical scientists, clinicians, clinical scientists, academics, and other health professionals with a range of subject and research expertise, many of whom are engaged in national networks, external peer review and consultancy within the general fields of biomedical sciences, medicine and healthcare.

Core modules within the programme enable students to actively engage in the discourses surrounding the concepts of health and its representations (QAA, 2019 and QAA 2023 for the updated SCI522 Applied and Medical Microbiology), and to critically apply their understanding to their own field of biomedical, practice. This ensures all students successfully completing it will be thoroughly grounded in ethical and reflective practice, have a sound subject specific and research knowledge base. The programme will appeal strongly to individuals seeking to study and practice at graduate professional level within biomedical sciences.

Specifically, the BSc (Hons) Biomedical Science gives students the opportunity to develop their research skills, explore specialist areas, and complete an independent research project (40 credits). Core modules will develop the students' knowledge, while improving their analytical skills by undertaking laboratory based investigations employing biomedical methodology.

The entire course is integrated through a study of the biology of disease, including modern concepts and applications of biomedical science in research, diagnosis and treatment of clinical disorders. The programme will help develop the skills for practice at graduate level, gaining a broad knowledge of the subject along the way.

The programme creates wide-ranging opportunities for employment in fields such as hospital pathology laboratories (NHS and private sector), biomedical and pharmaceutical industries, or public health laboratories. It provides preparation for undertaking the Institute of Biomedical Science Certificate of Competence (a compulsory requirement for being a registered Biomedical Scientist affiliated with the Health & Care Professions Council), and for those students wishing to undertake a career in research, teaching, medicine or to pursue studies towards a Masters or PhD. The skills developed and the use of authentic assessment will also ensure employment opportunities outside of immediate biomedical science areas as a further option.

7 Credit Accumulation and exit awards

Exit Awards
Successful completion of 120 credits at Level 4 entitles the student to the exit award of Certificate of Higher Education in Biomedical Science

Successful completion of 240 credits at Level 5 entitles the student to a Diploma of Higher Education in Biomedical Science

Successful completion of 300 credits at Level 6 entitles the student to a Bachelor's degree in Biomedical Science (Ordinary)

Successful completion of 360 credits at Levels 4, 5 and 6 entitles the student to a Bachelor's degree in Biomedical Science (Honours).

It is proposed that students will be able to claim IBMS accreditation on completion of level 6 (gaining 360 credits) .

8 Programme Structure Diagram, including delivery schedule

It is proposed that the new BSc (Hons) Biomedical Science programme will be delivered via face-to-face (contact) and with online material to supplement learning. Some existing modules from both faculties (shared with other programmes) will be used as they cover the content required by benchmark statements and IBMS accreditation, particularly at level 4. However, new modules comprise the majority of the programme. While care has been taken with the choice of module titles, it is important to note that all of the key areas within biomedical science are covered at each level in the content and assessment of modules.

Each module takes the form of a learning package consisting of face to face and directed learning teaching, supported and developed by text and online resources (accessed via the module space on Moodle), such as self-assessment questions, websites, emails, discussion boards, etc.

Typically, each module is designed to be studied over a semester (12 week) learning period, commencing with an introductory delivery at the university and/or the North Wales Clinical Research Centre. The first session(s) introduce the students to the module content (including support provision, learning materials and assessment details) and provides an

opportunity for the delivery of some subject matter and, where appropriate, relevant practical work. On-line learning will consist of blogs, learning diaries, contribution to fora, quizzes and regular tutorials with teaching staff.

This approach is favourable with employers, and will enable timetabling to fit around current teaching modules. Ultimately, this will also be attractive to part-time students and those who may wish to gain release from employment to study. The BSc will be accredited by the IBMS.

To achieve an honours degree, all students must undertake 320 credits of core taught curriculum modules, followed by a research project/dissertation (40 credit), which are detailed below along with the proposed schedule of delivery.

IBMS conversion applicants

Graduates with a non-accredited degree in a relevant area can apply to gain accreditation by the IBMS. Once any gaps in skills and learning outcomes are identified, the relevant biomedical science specific modules will be offered as stand-alone modules, to address these gaps and map against IBMS requirements. Students will need to pass these modules in order to gain accreditation.

Full-time delivery

Level 4

Mod Code	SCI447	Mod title	Professional Practice for the Biomedical & Life Sciences	Credit value	20	Core	Semester 1
Mod Code	SCI450	Mod title	Cell Biology, Biochemistry & Genetics	Credit value	20	Core	Semester 1
Mod Code	SCI442	Mod title	Maths and statistics for science	Credit value	20	Core	Semester 1
Mod Code	SCI458	Mod title	Essential Laboratory Skills	Credit value	20	Core	Semester 2
Mod Code	HLT427	Mod title	Health, Wellbeing and the Body	Credit value	20	Core	Semester 2
Mod Code	SCI446	Mod title	Introduction to Immunology & Microbiology	Credit value	20	Core	Semester 2

Level 5

Mod Code	SCI547	Mod title	Cell & Molecular Biology	Credit value	20	Core	Semester 1
Mod Code	SCI525	Mod title	Research Methods, Theory and Practice	Credit value	20	Core	Semester 2
Mod Code	SCI548	Mod title	Blood Sciences	Credit value	20	Core	Semester 1
Mod Code	SCI549	Mod title	Cellular & Histopathology	Credit value	20	Core	Semester 1
Mod Code	SCI552	Mod title	Applied and Medical Microbiology	Credit value	20	Core	Semester 2
Mod Code	SCI544	Mod title	Advanced laboratory skills for the Biomedical & Life Sciences	Credit value	20	Core	Semester 2

Level 6

Mod Code	SCI638	Mod title	Research project	Credit value	40	Core	Semester 1 & 2
Mod Code	SCI643	Mod title	Biology of Disease	Credit value	20	Core	Semester 1
Mod Code	SCI646	Mod title	Clinical Genetics & Cancer Biology	Credit value	20	Core	Semester 1
Mod Code	SCI644	Mod title	Infectious Disease, Immunity & Inflammation	Credit value	20	Core	Semester 2
Mod Code	SCI645	Mod title	Advances in Medicine: Diagnostics & Therapeutics	Credit value	20	Core	Semester 2

Part-time delivery

Level 4 (year 1)

Mod Code	SCI450	Mod title	Cell Biology, Biochemistry & Genetics	Credit value	20	Core	Semester 1
Mod Code	SCI458	Mod title	Essential Laboratory skills	Credit value	20	Core	Semester 2
Mod Code	HLT427	Mod title	Health, Wellbeing and the Body	Credit value	20	Core	Semester 2

Level 4 (year 2)

Mod Code	SCI447	Mod title	Professional Practice for the Biomedical & Life Sciences	Credit value	20	Core	Semester 1
Mod Code	SCI442	Mod title	Maths and statistics for science	Credit value	20	Core	Semester 1
Mod Code	SCI446	Mod title	Introduction to Immunology & Microbiology	Credit value	20	Core	Semester 2

Level 5 (year 3)

Mod Code	SCI548	Mod title	Blood Sciences	Credit value	20	Core	Semester 1
Mod Code	SCI549	Mod title	Cellular & Histopathology	Credit value	20	Core	Semester 2
Mod Code	SCI552	Mod title	Applied and Medical Microbiology	Credit value	20	Core	Semester 2

Level 5 (year 4)

Mod Code	SCI547	Mod title	Cell & Molecular Biology	Credit value	20	Core	Semester 1
Mod Code	SCI525	Mod title	Research Methods, Theory and Practice	Credit value	20	Core	Semester 1
Mod Code	SCI544	Mod title	Advanced laboratory skills for the Biomedical & Life Sciences	Credit value	20	Core	Semester 2

Level 6 (year 5)

Mod Code	SCI643	Mod title	Biology of Disease	Credit value	20	Core	Semester 1
Mod Code	SCI644	Mod title	Infectious Disease, Immunity & Inflammation	Credit value	20	Core	Semester 2

Mod Code	SCI645	Mod title	Advances in Medicine: Diagnostics & Therapeutics	Credit value	20	Core	Semester 2

Level 6 (year 6)

Mod Code	SCI638	Mod title	Research project	Credit value	40	Core	Semester 1& 2
Mod Code	SCI646	Mod title	Clinical Genetics & Cancer Biology	Credit value	20	Core	Semester 1

9 Intended learning outcomes of the programme

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Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
A1 Knowledge and theory	Demonstrate fundamental knowledge and analysis of relevant theoretical concepts	Demonstrate detailed knowledge and in-depth analysis of relevant theoretical concepts	Demonstrate extensive knowledge and critical analysis of relevant theoretical concepts	Demonstrate extensive knowledge and critical analysis of relevant theoretical concepts, practical applications and research
A2 Knowledge of practical issues	Demonstrate knowledge of a broad range of practical issues as applied to the field of biomedical sciences	Demonstrate knowledge and evaluation of a broad range of practical issues as applied to the field of biomedical sciences	Demonstrate critical evaluation of a broad range of practical issues as applied to the field of biomedical sciences	Demonstrate critical evaluation of a broad range of practical issues and research as applied to the field of biomedical sciences
A3 Integrating knowledge across biomedical disciplines	Recall and integrate knowledge and application from different areas of biomedical sciences	Explain and integrate knowledge and application from different areas of biomedical sciences	Synthesise and integrate knowledge and application from different areas of biomedical sciences	Synthesise and integrate knowledge and critical evaluation of different areas of biomedical science research
A4 Theoretical concepts and current biomedical science	Apply a theoretically informed perspective to relevant issues and current developments in biomedical sciences	Apply a theoretically informed perspective to explain and analyse relevant issues and current developments in biomedical sciences	Apply a critically and theoretically informed perspective to relevant issues and current developments in biomedical sciences	Apply a critical, theoretical and evidence-based informed perspective to relevant issues, current developments and contemporary research in biomedical sciences

Intellectual Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
B1 Academic skills	Demonstrate fundamental academic study skills	Demonstrate effective academic study skills and apply to all areas of study	Demonstrate advanced academic study skills and	Demonstrate advanced academic study skills and

	Level 4	Level 5	Level 6	Level 6 (Hons)
			evaluate their application to all areas of study	evaluate their application to all areas of study and research
B2 Scientific approach to study	Apply a scientific approach to academic study	Apply and explain scientific approaches to academic study	Apply and critically evaluate scientific approaches to academic study	Apply and critically evaluate scientific approaches to academic study and research
B3 Analysing data	Analyse and interpret data	Analyse, evaluate and interpret data	Critically analyse, evaluate and interpret data	Synthesise and integrate experimental data and relate to the current evidence base
B4 Formulating and testing hypotheses	Recall and describe the formulation and testing of hypotheses	Explain and analyse the formulation and testing of hypotheses	Critically analyse the formulation and testing of hypotheses	Critically analyse the testing of hypotheses through planning, conducting and critically evaluating specific research projects

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
C1 Health and safety	Show awareness of health and safety issues in biomedical science laboratories and perform risk assessments.	Show detailed knowledge and application of health and safety issues in biomedical science laboratories and perform risk assessments.	Show critical evaluation and application of health and safety issues in biomedical science laboratories and perform risk assessments.	Show critical evaluation and application of health and safety issues in biomedical science laboratories and perform risk assessments for routine tests and novel research projects.
C2 Ethics	Show awareness of ethical issues in contemporary biomedical science.	Show detailed awareness of ethical issues in contemporary biomedical science and explain the main concepts.	Show detailed knowledge and awareness of ethical issues in contemporary biomedical science. Critically evaluate the main concepts.	Show detailed knowledge and awareness of ethical issues in contemporary biomedical science. Critically evaluate the main concepts across all applications of biomedical science – clinical and research.

	Level 4	Level 5	Level 6	Level 6 (Hons)
C3 Biomedical laboratory processes	Observe, record accurately and describe biomedical science laboratory processes	Observe, record accurately and explain biomedical science laboratory processes	Observe, record accurately and critically evaluate biomedical science laboratory processes	Observe, record accurately and critically evaluate biomedical science laboratory processes and research
C4 IT skills and Statistical analysis	Demonstrate basic use of Microsoft office applications. Use relevant software to perform both descriptive and inferential statistics	Demonstrate comprehensive use of Microsoft office applications. Use relevant software to explain both descriptive and inferential statistics	Demonstrate more advanced use of Microsoft office applications. Use relevant software to critically analyse both descriptive and inferential statistics	Demonstrate more advanced use of Microsoft office applications. Conduct research projects, using relevant software and critically analysis of both descriptive and inferential statistics

Practical, Professional and Employability Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
D1 Laboratory reports	Prepare descriptive laboratory reports	Prepare descriptive and interpretive laboratory reports	Prepare descriptive, interpretive and critically analysed laboratory reports	Prepare descriptive, interpretive and critically analysed laboratory reports and research findings
D2 Laboratory practical skills	Demonstrate the practical skills involved in the preparation of practical reports	Demonstrate and explain the practical skills involved in the preparation of practical reports	Demonstrate and critically evaluate and analyse the practical skills involved in the preparation of practical reports	Demonstrate and critically evaluate and analyse the practical skills involved in the preparation of practical reports and conduct of research projects
D3 Academic communication	Demonstrate fundamental academic presentation skills (oral and written).	Demonstrate effective academic presentation skills (oral and writing).	Demonstrate a variety of effective academic presentation skills (oral and writing) and evaluate methods of presentation.	Demonstrate a variety of effective academic presentation skills (oral and writing) and evaluate methods of presentation. Analyse different types of scientific output.

	Level 4	Level 5	Level 6	Level 6 (Hons)
D4 Problem-solving	Apply basic theory and methods to a well-defined problem and appreciate the complexity of the issues in the subject.	Apply basic theory and methods to a well-defined problem and appreciate the complexity of the issues in the subject.	Apply basic theory and methods to a well-defined problem and appreciate the complexity of the issues in the subject.	Apply basic theory and methods to a well-defined problem and appreciate the complexity of the issues in the subject.

10 Learning and teaching strategy

The BSc (Hons) Biomedical Science programme is delivered on a modular basis and the mode of delivery will differ from module to module, depending upon the nature of the module content and its specific intended learning outcomes. Students should expect for all modules, however, to experience a range of learning and teaching strategies, which may include lectures, seminars, workshops, practical sessions and lab-based study, discussions, telephone and on-line tutorials, debates, group tutorials, case studies, problem-based learning, and visiting speakers, within a framework of inter-professional education wherever possible. In all these endeavours, tutors act as facilitators of learning rather than merely as a means of transmitting knowledge.

Moreover, for all programmes the University is moving towards a blended learning approach in line with the recently conceived Active Learning Framework, ALF. Whilst this was in part a response to the needs of remote delivery during the Covid19 pandemic it also meets the desire of the University to provide learning, teaching and assessment in a more flexible and accessible manner. Delivery will be truly of a 'blended' nature and will seek to find an optimum balance of face-to-face delivery and remote online delivery, being sensitive to the needs of the student body. Where online delivery is utilised adherence to ALF principles will ensure that content is interactive and fosters the development of an online community to which students will have a sense of belonging.

The learning and teaching approach will embrace the university active learning framework (ALF), which is driven by the goal to offer blended learning that is accessible, flexible and inclusive. A learner-centred approach will be adopted with the aim of promoting independent learning; as a consequence, direct face-to-face teaching or online contact hours will be supplemented by tutor-guided content with independent reading, and research which will emphasise the need to work in a critical way with theoretical and empirical research and scholarly sources. There will also be an emphasis on active learning and use of SCALE-UP methodology.

Additionally, the Moodle VLE will be used for developing interactive activities such as quizzes, wikis, and forums; it also allows staff and students to create discussion groups. Students will be encouraged to make significant use of on-line resources especially journals and e-books.

Academics of the Faculty of Social & Life Sciences, the Faculty of Arts, Science and Technology, and BCUHB staff, have many years of experience in offering distinctive programmes of study at diploma, undergraduate, postgraduate and post-doctoral experience levels. The university has considerable experience of supporting the learning needs of mature students and of students generally with 'non-standard entry' qualifications. Considerable experience has been achieved with students with limited entry qualifications both in terms of academic performance and personal development. Methods of teaching and learning are indicated clearly in each module descriptor and the list that follows describes the variety of approaches used by tutors.

The approach to learning and teaching is underpinned by the opportunities provided for academic staff for continual professional development (CPD). There are 94% of academic staff with a teaching qualification and/or professional recognition through Advance HE (HEA) fellowship, senior fellowship and principal fellowship. All programme leaders undergo an 'effective programme leadership' course and further opportunities are provided via the learning and teaching hub. The university also operates 'learning lunches' and 'bitesize' educational sessions.

The course is developed with the partnership with BCUHB in mind and responding to regional skills need.

Module delivery

Full time students study three modules within each semester. Each 20 credit module equates to 200 hours of study of which there is normally between 24 and 36 hours of contact time dependent on level, with the rest of the time being dedicated to directed study. Contact time decreases from 36 hours per 20 credit module at level 4 to 24 hours at level 6, in line with the expectation that students will progress steadily towards becoming independent learners as they progress through the programme.

Students will be expected to attend all timetabled sessions and a variety of engagement / attendance monitoring strategies will be employed to ensure adequate engagement and identify any attendance issues. At the start of each module, the module content (including support provision, learning materials and assessment details) will be described. Considerable guidance will be given on learning to learn, accessing and using resources and preparing assignments as well as an introduction to the modular content.

Students will be encouraged to form self-help groups (communicating through e-mail, Moodle discussion boards/cafés, chat rooms) and these will be explained and organised during the module delivery. The study hours for each module will include hours preparing for and completing assessments.

Learning Packages
(a) Student written communication will be in the form of Module Handbooks supported by a Programme Handbook. The Module Handbooks and Moodle support site will contain a range of text materials, articles, data handling exercises and so on to support student learning.
(b) On-line learning
On-line content may be variable in nature but typically will be based around the VLE (Moodle) and may comprise:

- A structured weekly guide to the module content
- Self-assessment questions
- Assessment details and guidance on presenting the assignment(s)
- Access to distant, appropriate websites
- Access to the Library on-line support (including e-books, open access journals, the Encyclopaedia of Life Sciences)
- Access to the module Discussion Board and fora.
- e-mail links to the module tutor(s)
- Text references.
- Access to the support infrastructure.
- Recorded lectures (panopto)

Practical work
At level 6, the amount of formal practical work is limited, but all students will undertake a 40 credit Research Project which will entail carrying out a practical investigation involving a relevant empirical study. This provides the opportunity for students to develop their data handling and analytical skills, to an advanced level, as well as their practical skills.
Employability Skills
Employability skills encompass the attributes that help graduates to secure employment, enable them to respond to the changing demands of the workplace and contribute positively to their employer's success and their own progress are essential as outcomes in programmes of study. Employability skills include; self-management, team working, business and customer awareness, problem-solving, communication and literacy, application

of numeracy, application of information technology. All programme modules have identifiable employability learning outcomes.
Visiting/sessional Lecturers
Visiting/sessional Lecturers will be used to support the delivery of the programme. This will provide expertise in pathology and will include contributions from a range of personnel involved in aspects of Biomedical, Clinical and Healthcare Sciences and related industries.

11 The Wrexham Graduate

At Wrexham University we aim to help students develop and enhance key employability skills and capabilities during their study. There are three key areas with different attributes, attitudes and skillsets and the aim is to help students have the opportunity to enhance and develop skills such as resilience, adaptability, confidence, team working, emotional intelligence and communication, creativity and acting ethically and sustainably. Programmes are designed to enable students to develop and enhance these skills via module content, module learning outcomes and assessment opportunities. Each module will help provide different opportunities for developing and enhancing these capabilities.

The Careers team are available to provide information, advice and guidance and access to resources for potential students, current students and graduates. WGUConnect provides students with access to an online directory of vacancies.

The Careers team can support students with employability and interview skills such as use of the STAR (Situation, Task, Action, Result) technique that many recruiters use to gather relevant information about a specific capability that the job requires.

12 Work based/placement learning statement

Taught modules will not include any work-based learning as part of the BSc (Hons) Biomedical Science programme framework. However, research projects/dissertations may be undertaken at the student's biomedical science area of work (for those undertaking the degree on a part time basis and in a professional placement of work).

The key biomedical lab-based learning element of the programme is the level 5 module, 'Advanced Laboratory Skills for the Biomedical & Life Sciences', which will be delivered in collaboration with BCUHB North Wales Clinical Research Centre. This module has been mapped against the IBMS Certificate of Competence and will involve students carrying out a range of specific laboratory-based and problem-solving exercises utilising the resources at the NWCRC.

Assessment will be based around written elements of the work including completion of laboratory reports and the keeping of a laboratory notebook but will also include assessment of practical and professional skills based on observation of practice.

The module will be delivered and assessed by staff at the NWCRC, who will be members of the academic programme team and will ensure the academic quality of the work. These team members have considerable prior experience of the delivery and assessment of laboratory-based teaching at both undergraduate and postgraduate level. Although a work-based module the content and learning outcomes will be clearly defined and will not have the issues that may be associated with a regular 'placement'.

Students undertaking their dissertation will be allocated a named dissertation supervisor who will meet with the student individually. Group sessions addressing general issues will also be provided and students will also be encouraged to attend research department seminars in

areas that will benefit them. It is further anticipated that some students may elect to undertake their L6 Research Project at the NWCRC.

The university has a thriving Careers and Employability department that supports our students and graduates, giving careers guidance appointments on a one to one basis, a drop-in careers clinic, available on a weekly basis during term time. There is also a list of vacancies available on the Careers VLE, advertising a wide range of part-time, temporary and vacation work for students. These include graduate opportunities, on-campus work, work experience and voluntary work. The service offers a free vacancy advertising service to local, national and international employers and recruitment events so that students are able to access a wide range of potential employers.

The programme team, in partnership with the local health board, will set up hospital lab visits, to introduce students to the health board and to the role of the Biomedical Scientist in the NHS and beyond.

To further strengthen the work based learning aspect, modules delivered by BCUHB staff will incorporate lectures from medics and laboratory scientists. Exposure to experts in the field is invaluable in communicating experiences of the work place and building scenarios. In addition, modules offer multiple opportunities for students to work alongside practising biomedical scientists and researchers based at the NWCRC, including a mini project and the Advanced Laboratory Skills module at level five, and L6 Research project.

13 Welsh medium provision

The programmes will be delivered through the medium of English. Students are entitled to submit assessments in the medium of Welsh. Some members of the programme team are Welsh speakers and where these tutors are supervising research projects (for example *Research Methods, Theory and Practice* and *Research Project* then supervision may, if desired, occur through the medium of Welsh.

14 Assessment strategy

Students will be assessed on their academic achievement of the programme learning outcomes, which in turn, are achieved by meeting the learning outcomes of core modules. The assessment of the programme learning outcomes will therefore be achieved by assessment at the module level. Selection of the methods for assessment will be determined by the requirements of each individual module, and the rationale for selection of those methods will be considered in the module specifications.

Assessments are chosen to examine a student's ability to integrate theory and practice, and to think critically in relation to theory, empirical research and practice.

Subject specific, professional and transferable skills are developed within classroom-based and independent learning activities. Most modules assess a variety of skills, either directly or indirectly through the assessment work for the module.

The Research Project module enables students to study and research into a specific topic in great depth, and also develops further the capacities for self-managed learning and critical thinking.

Module code & title	Assessment type and weighting	Indicative submission date
LEVEL 4		
SCI447 Professional Practice for the Biomedical & Life Sciences	Learning Log / Journal 60% Presentation 40%	Wk 17, Sem 1 Wk 21, Sem 1
SCI450 Cell Biology, Biochemistry and Genetics	Exam 50% Report 50%	Wk 27, Sem 1 Wk 25, Sem 1
SCI442 Maths and statistics for science	Exam - Online multiple choice questions (50%) Coursework (50%)	Wk 18, Sem 1 Wk 25, Sem 1
SCI458 Essential Laboratory skills	Coursework (50%) Written Assignment (50%)	Wk 42, Sem 2
HLT427 Health, Wellbeing and the Body	Exam 100%	Wk 43/44 Sem 2
SCI446 Introduction to Immunology & Microbiology	Coursework 30% Report 20% Poster presentation 50%	Wk 33, Sem 2 Wk 39, Sem 2 Wk 41, Sem 2
LEVEL 5		
SCI547Cell & Molecular Biology	Exam 100%	Wk 27, Sem 1
SCI549 Cellular & Histopathology	Written Assignment 50% Exam 50%	Wk 41, Sem 2 Wk 43/44, Sem 2
SCI525 Research Methods: Theory and Practice	Portfolio 100% • Proposal element of portfolio • Report element of portfolio • Poster Presentation element of portfolio	Wk 15, Sem 1 Wk 21, Sem 1 Wk 25, Sem 1
SCI552 Applied and Medical Microbiology	Presentation (60%) Exam (40%)	Wk 43/44, Sem 2 Wk 40, Sem 2
SCI548 Blood Sciences	Exam 50% Written Assignment 50%	Wk 27, Sem 1 Wk 25, Sem 1
SCI544 Advanced laboratory skills for the Biomedical & Life Sciences	Practical Report 60% Report 40%	Wk 35, Sem 2 Wk 41 Sem 2
LEVEL 6		
SCI638 Research Project	Dissertation 80% Presentation 20%	Wk 40, Sem 2 Wk 35, Sem 2
SCI643 Biology of Disease	Presentation 80% Written Assignment 20%	Wk 21, Sem 1 Wk 26, Sem 1
SCI646 Clinical Genetics & Cancer Biology	Coursework 40% Exam 60%	Wk 19, Sem 1 Wk 27, Sem 1
SCI644Infectious Disease, Immunity & Inflammation	Written Assignment 40% Exam 60%	Wk 33, Sem 2 Wk 43/44, Sem 2

Module code & title	Assessment type and weighting	Indicative submission date
SCI645 Advances in Medicine: Diagnostics & Therapeutics	Coursework 50% Presentation 50%	Wk 35, Sem 2 Wk 42, Sem 2

15 Assessment and award regulations

Derogations

For modules that cover the clinical laboratory sciences subject areas as listed below, credits shall be awarded by an Assessment Board in which a pass mark (40%) or a pass grade has been achieved and all elements of assessment have been passed at or above 40%.

SCI549 Cellular & Histopathology
SCI548 Blood Sciences
SCI544 Advanced laboratory skills for the Biomedical & Life Sciences
SCI552 Applied and Medical Microbiology
SCI645 Advances in Medicine: Diagnostics & Therapeutics
SCI643 Biology of Disease
SCI646 Clinical Genetics & Cancer Biology
SCI644Infectious Disease, Immunity & Inflammation

Compensation will not be permitted for modules that cover the clinical laboratory sciences or for any other module(s) that contribute significantly to the benchmark statement and have learning outcomes that students achieve that cannot be evidenced elsewhere, as listed below

SCI547Cell & Molecular Biology
SCI549 Cellular & Histopathology
SCI548 Blood Sciences
SCI544 Advanced laboratory skills for the Biomedical & Life Sciences
SCI552 Applied and Medical Microbiology
SCI645 Advances in Medicine: Diagnostics & Therapeutics
SCI643 Biology of Disease
SCI646 Clinical Genetics & Cancer Biology
SCI644Infectious Disease, Immunity & Inflammation

Non Credit Bearing assessment
N/A

Borderline Classifications (Undergraduate programmes)

In considering borderline cases the Assessment Board shall raise the classification to the next level if all of the following criteria are met:
- At least 50% of the credits at level 6 fall within the higher classification.
- All level 6 modules must have been passed at the first attempt.
- The mark achieved for the *dissertation or other substantial* module is within the higher classification.

Ordinary Degrees
N/A

Restrictions for trailing modules (Taught Masters)
N/A

Prerequisites for processing to MRes research component
N/A

16 Accreditation

Students must complete all of the modules (i.e. taught and research dissertation) to gain IBMS accreditation for the BSc in Biomedical Science

17 Quality Management

All provision is expected to comply with the University processes for quality assurance, the QAA Quality Code and any specific PSRB requirements to ensure the quality of the learning and teaching on the programme. The University uses the following mechanisms to help evaluate, enhance and review programmes delivery;

Student Evaluation of Module forms
Student Voice Forum
Individual student feedback
Student representatives
Annual Monitoring reports
Periodic review and re-validation process
External Examiner reports
PSRB requirements and accreditation activities
National Student Survey (NSS)

18 Support for Students

The University has a range of departments that offer support for students such as:

- Library & IT Resources
- Inclusion Services
- Careers Service
- Chaplaincy
- Counselling & Wellbeing
- Student Funding and Welfare
- Student Administration

Please access the website at www.wrexham.ac.uk to find out more about the Departments

The Student Union offers support for students, please access their website at to find out more. https://www.wrexhamglyndwrsu.org.uk/

All students at Wrexham University are allocated a Personal Tutor whose main responsibility is to act as the first point of contact for their personal students and to provide pastoral and academic support throughout their studies at the University.

19 Equality and Diversity

Wrexham University is committed to providing access to all students and promotes equal opportunities in compliance with the Equality Act 2010 legislation. This programme complies fully with the University's Equality and Diversity Policy, ensuring that everyone who has the potential to achieve in higher education is given the chance to do so. Please click on the following link for more information about equality and diversity