UNIVERSITY OF PLYMOUTH

Faculty of Health

School of Biomedical Sciences

Programme Specification

MSc / PgDip Biomedical Science

2025/26 Academic Year

Date Approved From: Dec 2019
Date of Implementation: Sept 2020
Date of First Award: 2021

Internal Programme Code	Award Title	Site	Mode of Study
4797	MSc Biomedical Science	Plymouth	Full Time
5768	MSc Biomedical Science	Plymouth	Part Time
5236	PgDip Biomedical Science	Plymouth	Full Time

Reviewed	Amended following review (Y/N)	Sections amended

Contents

1. MSc / PgDip Biomedical Science

Final award title:

- **MSc Biomedical Science (Cancer Biology)**
- **MSc Biomedical Science (Clinical Neuroscience)**
- **MSc Biomedical Science (Infection & Immunity)**
- **MSc Biomedical Science**

Students are recruited to one of the three MSc Biomedical Science bracketed award titles above but may only exit with the bracketed award title on successful completion of the compulsory modules and both modules associated with that pathway.

Should students opt to undertake a dissertation project unrelated to their chosen pathway they may be awarded the unbracketed MSc Biomedical Science award title (Note: it is not normally possible for students to select two modules from different pathways because of the theory covered in the semester one module).

Level 7 Intermediate award title(s):

- **PgDip Biomedical Science (Cancer Biology)**
- **PgDip Biomedical Science (Clinical Neuroscience)**
- **PgDip Biomedical Science (Infection & Immunity)**
- **PgDip Biomedical Science**

A postgraduate Diploma may be awarded following the successful completion of 120 credits. A bracketed award title requires completion of both pathway modules.

- **PgCert Biomedical Science (Cancer Biology)**
- **PgCert Biomedical Science (Clinical Neuroscience)**
- **PgCert Biomedical Science (Infection & Immunity)**
- **PgCert Biomedical Science**

A postgraduate Certificate exit award may be awarded following the successful completion of 60 credits. A bracketed award title requires completion of both pathway modules.

2. Awarding Institution: University of Plymouth
Teaching institution(s): University of Plymouth

3. Accrediting body(ies): Institute of Biomedical Science

Date of re-accreditation 2023

UCAS code: N/A

HECOS code: 100260

Date of Final Approval: February 2014

4. Distinctive Features of the Programme and the Student Experience

- MSc Biomedical Science suite of programmes builds on the strength of our IBMS accredited Biomedical Science undergraduate programme providing an in-depth understanding of principal techniques employed in biomedical research.

- Enhanced by the contemporary research activities within the School's Biomedical Research Group (BRG) and the faculty's flagship Plymouth Institute of Health and Care Research (PIHR).

- Strong international reputation in translational research with significant financial investment in laboratory infrastructure.

- Pathways aligned to our core research themes of Cancer, Neuroscience, and Infection, Immunity, Inflammation

- Project aligned to their specialism undertaken within BRG and the University's Systems Biology Centre.

- Learning and teaching enriched by our research-active staff within the Faculty of Health, and our NHS links.

5. Relevant QAA Subject Benchmark Group(s)

- "SEEC Credit Level Descriptors for Higher Education", Southern England Consortium for Credit Accumulation and Transfer (SEEC), 2010 accessible from: https://www.seec.org.uk/resources/

  https://www.qaa.ac.uk/docs/qaa/quality-code/higher-education-credit-framework-for-england.pdf
- "Master's Degree characteristics" The Quality Assurance Agency for Higher Education (QAA), September 2015 accessible from: https://www.qaa.ac.uk/docs/qaa/quality-code/master's-degree-characteristics-statement.pdf?sfvrsn=6ca2f981_10

- There are no Subject Benchmarks for postgraduate awards in Biomedical Science but in preparing the documentation the programme team have consulted the "Criteria and Requirements for the Accreditation and Re-accreditation of MSc degrees in Biomedical Science", Institute of Biomedical Sciences, version 2.2i, October 2016. This document refers to the QAA Subject Benchmark Statement which defines the subject area of biomedical science relating to BSc Honours degrees. Accessible from https://www.ibms.org/education/university-information/.

6. Programme Structure

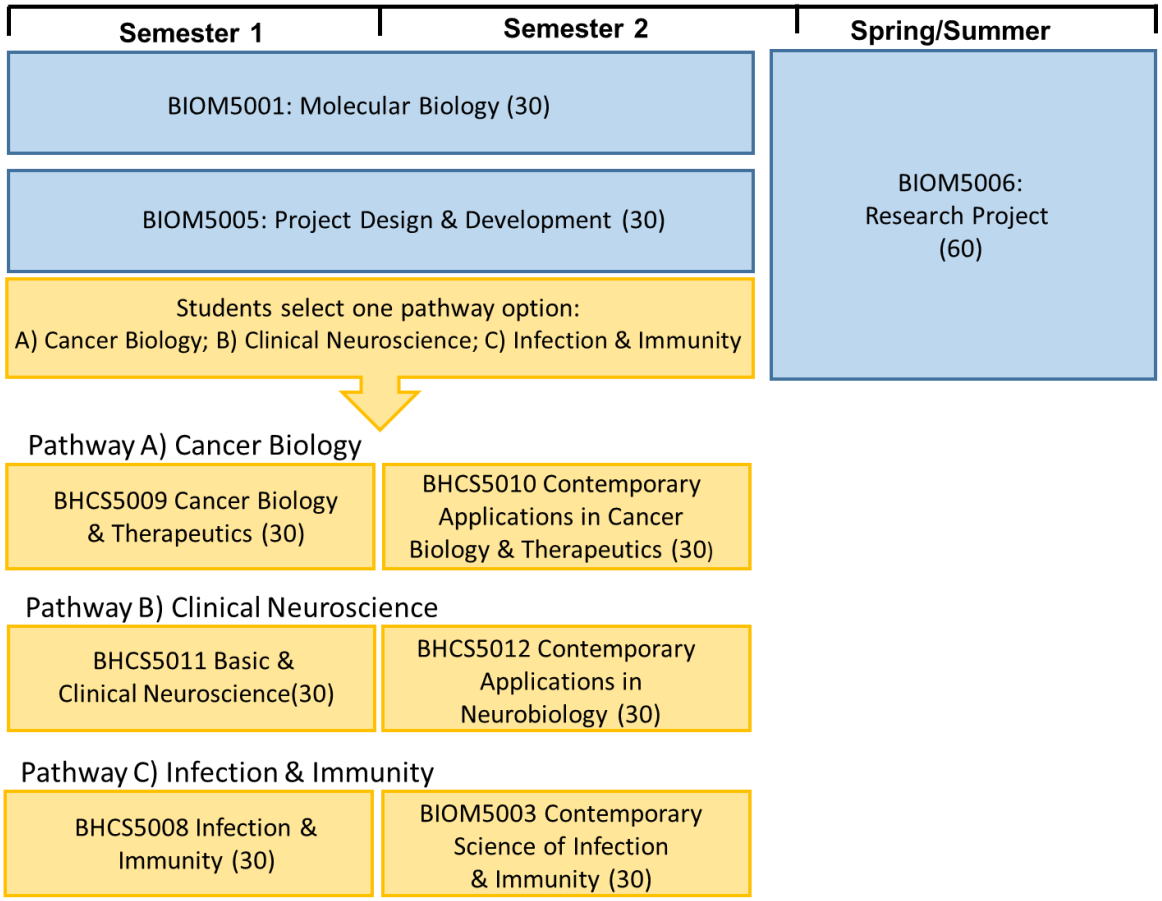
6.1. MSc Biomedical Science – Full Time

Students are recruited to one of the following MSc Biomedical Science bracketed award titles but may only exit with the bracketed award title on successful completion of the compulsory modules and both modules associated with that pathway.

- MSc Biomedical Science (Cancer Biology)
- MSc Biomedical Science (Clinical Neuroscience)
- MSc Biomedical Science (Infection & Immunity)
- MSc Biomedical Science

Should students opt to undertake a dissertation project unrelated to their chosen pathway they may be awarded the following unbracketed award title (Note: it is not normally possible for students to select two modules from different pathways because of the theory covered in the semester one module):

MSc Biomedical Science Programme Structure and Delivery (full time)

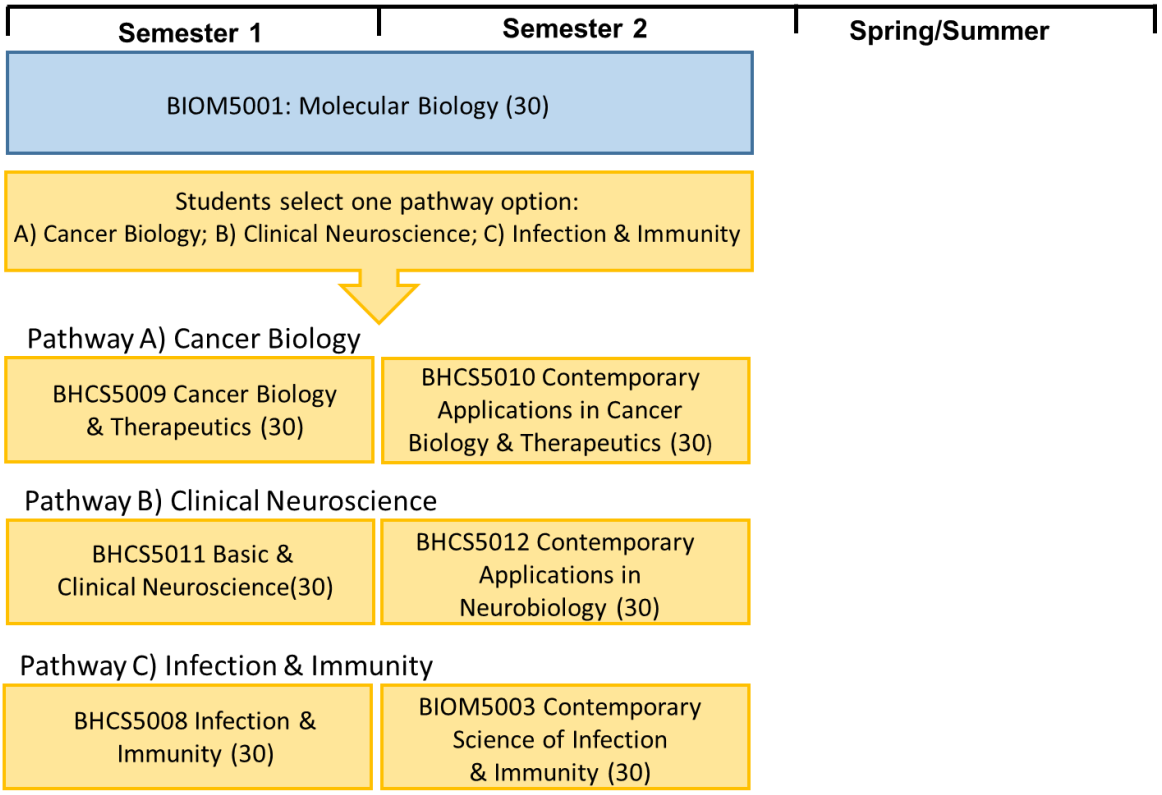


All students undertake the compulsory modules in blue (BIOM5001 (30 credits), BIOM5005 (30 credits) and BIOM5006 (60 credits) and select one of the three pathway options in orange (either Pathway A: Cancer Biology (2 x 30 credit modules), Pathway B: Clinical Neuroscience (2 x 30 credit modules) or Pathway C: Infection & Immunity) (2 x 30 credit modules). BIOM5005 (30 credits) is a pre-requisite module that must be completed for progression on the BIOM5006 (60 credits).

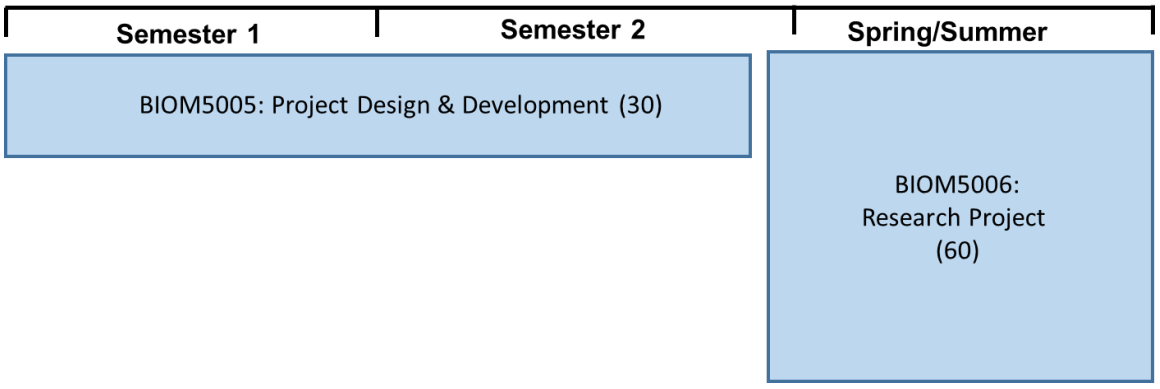
6.2 MSc Biomedical Science – Part time

Students are recruited to one of the MSc Biomedical Science pathway awards, undertaking 90 credits per year over two years.

Year 1: MSc Biomedical Science Programme Structure and Delivery (Part-time)



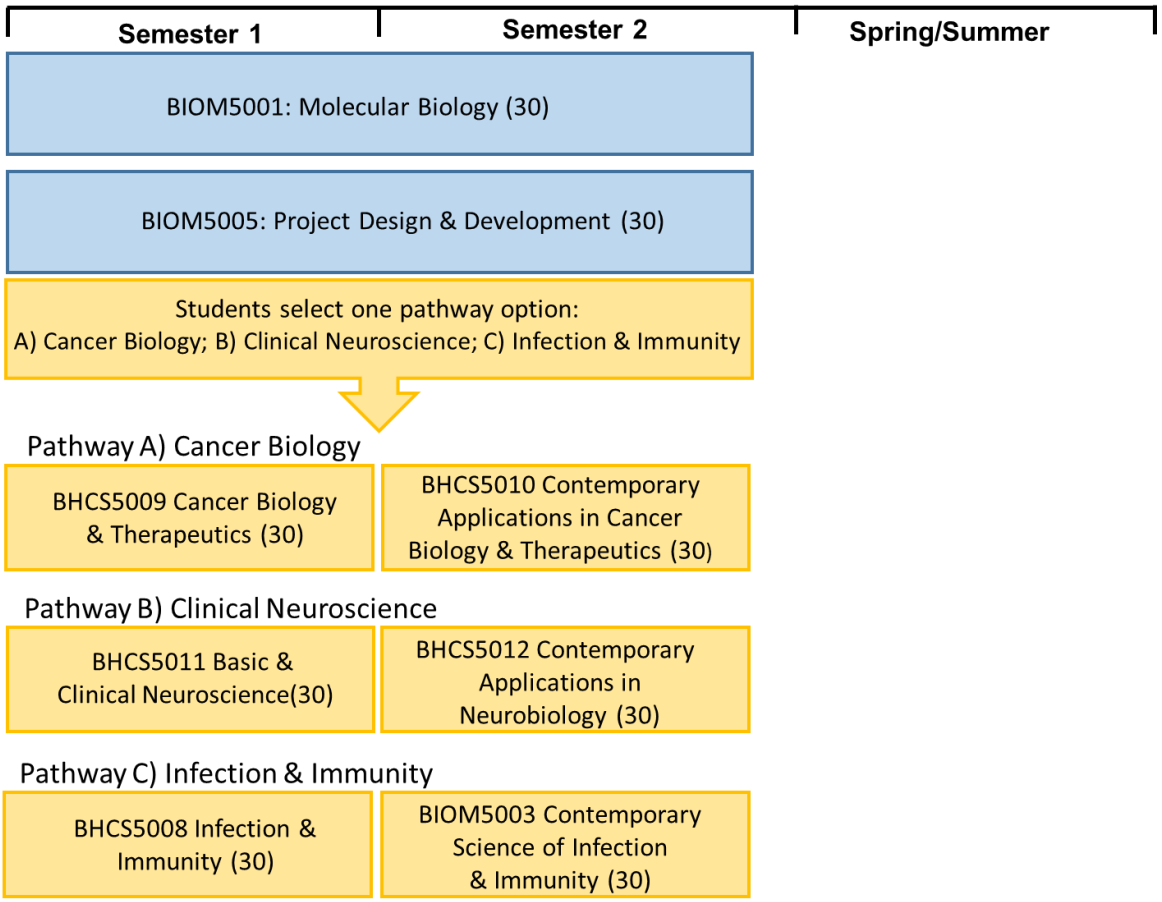
Year 2: MSc Biomedical Science Programme Structure and Delivery (Part-time)



6.3 PgDip Biomedical Science

Students are recruited to one of the PgDip Biomedical Science pathway awards undertaking 120 credits. A postgraduate Diploma may be awarded following the successful completion of 120 credits. A bracketed title award requires completion of both pathway modules.

PgDip Biomedical Science Programme Structure and Delivery (full time)



7 Programme Aims and Learning Outcomes

Overall aims of Postgraduate Taught Programmes in the School of Biomedical Sciences

- provide opportunities for postgraduate students from a range of biomedical, biological, biochemical or biological backgrounds to develop and realise their potential in a supportive and responsive environment;
- provide modular programmes which are vocationally specific, intellectually challenging and relevant to careers in biomedical and healthcare science
- equip students with advanced scientific and technical knowledge and understanding of the subject area together with the cognitive, practical and specialist skills needed in employment or courses of further study;
- further develop students' ability to operate professionally, ethically, innovatively and autonomously within complex specialised contexts in biomedical sciences.

Educational aims of the MSc Biomedical Science/PgDip Biomedical Science programme

To provide students with:

- advanced knowledge, understanding and skills required for the systematic study of their chosen discipline of biomedical science through the application of contemporary methodologies and technologies
- ability to analyse complex situations and apply critical, analytical and problem solving skills to synthesise innovative responses in unpredictable environments
- advanced skills in information gathering, interpretation, critical analysis and evaluation and the formulation of recommendations in a professional scientific context;
- practical and technological expertise appropriate to contemporary practice in their chosen discipline(s) of biomedical science;
- professional communication and interpersonal skills;
- ability to design and self-manage a research project **(MSc only)**
- ability to recognise the significance and contribution of their research to existing published work **(MSc only)**.
- skills of planning and management of learning which will enable their continual professional development after the completion of the course.

8. Programme Intended Learning Outcomes

8.1. Knowledge and understanding

The programme provides opportunities for students to develop and demonstrate (subject specific) ***Knowledge and Understanding*** as follows:

1) Knowledge base: has depth and systematic understanding of knowledge in specialised/applied areas and/across areas and can work with theoretical/research-based knowledge at the forefront of their academic discipline
2) Disciplinary methodologies: has a comprehensive understanding of techniques/methodologies applicable to their own work (theory or research-based)

8.2. Cognitive and intellectual skills

The programme provides opportunities for students to develop and demonstrate generic ***cognitive/intellectual s***kills as follows:

1) **Analysis:** with critical awareness can undertake analysis of complex, incomplete or contradictory areas of knowledge communicating the outcome effectively
2) **Synthesis:** with critical awareness, can synthesise information in a manner that may be innovative, utilising knowledge or processes from the forefront of their discipline/practice
3) **Evaluation**: has a level of conceptual understanding that will allow her/him critically to evaluate research, advanced scholarship and methodologies and argue alternative approaches
4) **Application:** can demonstrate initiative and originality in problem solving. Can act autonomously in planning and implementing tasks at a professional or equivalent level, making decisions in complex and unpredictable situations **(MSc)**

8.3. Key and transferable skills

The programme provides opportunities for students to develop and demonstrate (generic) ***Key/transferable skills*** as follows:

1) **Learning resources:** is able to use full range of learning resources
2) **Management of information:** can competently undertake research tasks with minimum guidance **(MSc)**
3) **Autonomy:** is an independent and self-critical learner, guiding the learning of others and managing own requirements for continuing professional development
4) **Communications:** can engage confidently in academic and professional communication with others, reporting on action clearly, autonomously and competently

8.4. Employment related skills

The programme provides opportunities for students to develop and demonstrate (generic) ***Employment related skills*** as follows:

1) **Self-evaluation:** is reflective on own functioning and has the independent learning ability required for continuing professional development.

8.5. Practical skills

The programme provides opportunities for students to develop and demonstrate (generic) ***Practical skills*** as follows:

1) **Application of skills:** can operate in complex and unpredictable, possibly specialised contexts, and has an overview of the issues governing good scientific practice.
2) **Autonomy in skill use**: is able to exercise initiative and personal responsibility in professional practice within a biomedical science context.
3) **Technical expertise:** has technical expertise, performs smoothly with precision and effectiveness; can adapt skills and design or develop new skills or procedures for new situations **(MSc)**

9. Admissions Criteria, including RPL and Disability Services arrangements

9.1 Entry Requirements

Admissions criteria:

- “Applicants require a minimum of an upper second-class UK honours degree in biomedical sciences, life sciences or related subject with a genetics component, or an overseas qualification of an equivalent standard. Intercalating or graduate medical/dental/veterinarian applicants or those with substantial relevant work-based experience are encouraged to apply and will be considered on an individual basis. University of Plymouth alumni who do not meet this requirement can contact the programme lead in the first instance. Please list the pathway you are applying for in your application. A short interview may be undertaken as part of the applications process.”
- Applicants with overseas qualifications can check their comparability with the UK equivalent through UK NARIC, who provide an advisory service.

OR

- Other qualifications and experience deemed equivalent by the Programme Manager in subject content and level of attainment to any of the above.

In addition

- Applicants who have not had their secondary or tertiary education through the medium of English should have attained the equivalent of an IELTS score of at least 6.5 with a minimum of 6.0 in each component.

9.2 Intercalation

The MSc Biomedical Science degree is a one-year full-time programme. Medical, Dental and Veterinary students are therefore able to complete the standard programme as an intercalating year.

Students on the Bachelor of Medicine Bachelor of Surgery (BMBS), or the Bachelor of Dental Surgery (BDS) at University of Plymouth Faculty of Health have the opportunity to explore another discipline at degree or MSc level and can take advantage of the University of Plymouth’s degree programmes. Metrics based

upon performance since admission to the BMBS and BDS programmes will be used to calculate the highest performing students in each year and selection into the MSc Biomedical Science programme will be based upon these.
Due to the structure of the medical and dental programmes, students on the BMBS take their intercalated year between years 4 and 5 of their medical studies whilst the intercalating year for dental students will be between year 3 and 4 of the BDS degree.

Applications from students on other Medical, Dental and Veterinary programmes will be considered, but they will need to demonstrate they have the relevant academic knowledge in biomedical, biological or biochemical sciences and may need to seek academic leave of absence from their host institution.

9.3 Equality of Opportunity

The University aims to ensure that all applicants receive fair treatment. In line with its Strategic Plan, the University has strategies to promote equality of opportunity, widen participation and encourage access.

Further information on equality, diversity and inclusion can be found at: https://www.plymouth.ac.uk/your-university/about-us/university-structure/service-areas/equality-diversity-and-inclusion.

We welcome and support students with disabilities, and we endeavour to meet specific needs. Disability Services, based on the Plymouth Campus, supports disabled students across the University. Further information about the advice and support before, during and after application can be found at: https://www.plymouth.ac.uk/student-life/services/learning-gateway/disability-and-dyslexia.

The nature of certain projects requires you to be compliant and able to operate in a laboratory setting. It is important for us to consider any individual requirements sufficiently far in advance to enable us to advise you on the range of options available and to put in place appropriate arrangements. Students will be advised to tell us about any disability upon application.

9.4 Recognition of Prior Learning (RPL)

The University's regulations for Recognition of Prior Learning are set out in the 'Academic Regulations'. https://www.plymouth.ac.uk/student-life/your-studies/essential-information/regulations.

We may also consider admission on the basis of work or life experience.

We welcome evidence of prior learning and experience from applicants. Due to the range and mixture of prior qualification and experience applications presenting such evidence will be considered on an individual basis by the Admissions Tutor in consultation with the programmes team.

Students with relevant postgraduate awards from other institutes may be able to apply for advanced entry subject to the Faculty's accreditation of prior learning procedures.

10. Criteria for Final and Intermediate Awards

The MSc Programme encompasses three possible award levels; the target award (that is the award on which the majority of students enroll) of MSc and the two interim award levels (that the student may exit with subject to the successful completion of the relevant modules). For the MSc, the named specialist pathway will be applied in brackets upon successful completion of the compulsory modules and both pathway modules.

Should students opt to undertake a dissertation project unrelated to their chosen pathway they may be awarded the unbracketed MSc Biomedical Science award title (Note: it is not normally possible for students to select two modules from different pathways because of the theory covered in the semester one module).

The PgDip Biomedical Science recognises that individuals may wish to gain masters level credit to update their knowledge and enhance their career prospects, but do not necessarily need to undertake a research project. The PgDip Biomedical Science will be awarded upon successful completion of 120 credits, as detailed in Section 6, Programme Structure. The bracketed award title will apply upon the successful completion of both pathway modules.

A PgCert is an exit award only (of both the MSc and PgDip) which may be awarded upon successful completion of 60 M level credits from within the available diet of modules. For a bracketed award, students must complete both pathway modules (pathway option). For a non-bracketed award, students may undertake one core module and one module from the pathways (non-pathway option). For the non-pathway option, applicants must first discuss their choice and experience with the programme leader.

Awards (including those of MSc with Merit or Distinction) will be made in line with the academic regulations (https://www.plymouth.ac.uk/student-life/your-studies/essential-information/regulations.

11. Exceptions to Regulations

None

12. Transitional Arrangements

None

13. Appendices:

13.1. Programme Specification Mapping (PGT): module contribution to the meeting of Award Learning Outcomes.

Module	**Credits**	**C** core **E** Elective pathways (I&I) infection and immunity (CB) cancer biology (NS) clinical neuroscience	Award Learning Outcomes contributed to (for more information see Section 8)													Compensation Y/N	**Assessment element(s) and weightings** [use KIS definition] E1 - exam E2 - clinical exam T1 - test C1 - coursework A1 - generic assessment P1 - practical
			Knowledge & understanding		Cognitive & intellectual skills				Key & transferable skills				Employment related skills	Practical skills				
			1	2	1	2	3	4	1	2	3	4	1	1	2	3		
BIOM5001	30	C	X	X	X	X		X	X		X	X		X	X	X	N	C1 70%; P1 30%
BIOM5005	30	C	X		X	X	X	X	X		X	X		X	X	X	N	C1 100%; A1 P/F
BIOM5006	60	C		X	X	X	X	X	X	X	x	X	X	X	X	X	N	C1 80%; P1 20%
Learning Outcomes 120 credits			X	X	X	X	X	X	X	X	X	X	X	X	X	X		
BIOM5003	30	E (I&I)	X	X	X	X		X	X		X		X	X	X	X	N	T1 70%; P1 30%
BHCS5008	30	E (I&I)	X	X	X	X	X	X	X		X	X					N	C1 50%; P1 50%
BHCS5009	30	E (CB)	X	X	X	X	X	X	X		X	X	X				N	C1 50%; P1 50%
BHCS5010	30	E (CB)	X	X	X	X		X	X		X			X	X	X	N	C1 70%; P1 30%
BHCS5011	30	E (CN)	X	X	X	X	X	X	X		X	X	X				N	C1 50%; P1 50%
BHCS5012	30	E (CN)	X	X	X	X		X	X		X			X	X	X	N	C1 70%; P1 30%
Learning Outcomes 180 credits			X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Confirmed Award LOs			X	X	X	X	X	X	X	X	X	X	X	X	X	X		

13.2. Assessed Learning Outcomes vs Assessment Strategies

PROGRAMME LEARNING OUTCOME	*ALL STUDENTS*					*PATHWAYS*			
				CANCER BIOLOGY		CLINICAL NEUROSCIENCE		INFECTION & IMMUNITY	
KNOWLEDGE AND UNDERSTANDING	BIOM5001	BIOM5005	BIOM5006	BHCS5009	BHCS5010	BHCS5011	BHCS5012	BHCS5008	BIOM5003
Knowledge base: has depth and systematic understanding of knowledge in specialised/applied areas and/across areas and can work with theoretical/research-based knowledge at the forefront of their academic discipline	C1 P1	C1	C1 P1	C1 P1	C1 P1	C1 P1	C1 P1	C1 P1	T1 P1
Disciplinary methodologies: has a comprehensive understanding of techniques/methodologies applicable to their own work (theory or research-based)	C1 P1	C1	C1 P1	C1 P1	C1 P1	C1 P1	C1 P1	C1 P1	P1

COGNITIVE AND INTELLECTUAL SKILLS	BIOM5001	BIOM5005	BIOM5006	BHCS5009	BHCS5010	BHCS5011	BHCS5012	BHCS5008	BIOM5003
Analysis: with critical awareness can undertake analysis of complex, incomplete or contradictory areas of knowledge communicating the outcome effectively	C1 P1	C1	C1 P1	C1 P1	C1 P1	C1 P1	C1 P1	C1 P1	T1 P1
Synthesis: with critical awareness, can synthesise information in a manner that may be innovative, utilising knowledge or processes from the forefront of their discipline/practice	C1 P1	C1	C1 P1	C1 P1	C1	C1 P1	C1 P1	C1 P1	T1 P1
Evaluation: has a level of conceptual understanding that will allow her/him critically to evaluate research, advanced scholarship and methodologies and argue alternative approaches	C1 P1	C1	C1 P1	C1 P1	C1 P1	C1 P1	C1 P1	C1 P1	T1 P1
Application: can demonstrate initiative and originality in problem solving. Can act autonomously in planning and implementing tasks at a professional or equivalent level, making decisions in complex and unpredictable situations		C1	C1 P1						

PROGRAMME LEARNING OUTCOME	*ALL STUDENTS*					*PATHWAY SPECIFIC MODULES*			
				CANCER BIOLOGY		CLINICAL NEUROSCIENCE		INFECTION & IMMUNITY	
KEY AND TRANSFERABLE SKILLS	BIOM5001	BIOM5005	BIOM5006	BHCS5009	BHCS5010	BHCS5011	BHCS5012	BHCS5008	BIOM5003
Learning resources: is able to use full range of learning resources	C1	C1 A1	C1	C1 P1	C1	C1 P1	C1	C1 P1	T1 P1
Management of information: can competently undertake research tasks with minimum guidance		C1 A1	C1 P1						
Autonomy: is an independent and self-critical learner, guiding the learning of others and managing own requirements for continuing professional development	C1	C1 A1		C1	C1	C1	C1	C1	P1
Communications: can engage confidently in academic and professional communication with others, reporting on action clearly, autonomously and competently	P1	C1	C1 P1	C1 P1	C1	C1 P1	C1 P1	C1 P1	P1

PROGRAMME LEARNING OUTCOME	*ALL STUDENTS*			*PATHWAY SPECIFIC MODULES*					
				CANCER BIOLOGY		CLINICAL NEUROSCIENCE		INFECTION & IMMUNITY	
EMPLOYMENT RELATED SKILLS	BIOM5001	BIOM5005	BIOM5006	BHCS5010	BHCS5009	BHCS5011	BHCS5012	BHCS5008	BIOM5003
Self-evaluation: is reflective on own functioning and has the independent learning ability required for continuing professional development			C1 A1						

PROGRAMME LEARNING OUTCOME	*ALL STUDENTS*			*PATHWAY SPECIFIC MODULES*					
				CANCER BIOLOGY		CLINICAL NEUROSCIENCE		INFECTION & IMMUNITY	
PRACTICAL SKILLS	BIOM5001	BIOM5005	BIOM5006	BHCS5009	BHCS5010	BHCS5011	BHCS5012	BHCS5008	BIOM5003
Application of skills: can operate in complex and unpredictable, possibly specialised contexts, and has an overview of the issues governing good scientific practice	C1	C1	C1		C1		C1		P1
Autonomy in skill use: is able to exercise initiative and personal responsibility in professional practice within a biomedical science context		C1 A1	C1 A1						
Technical expertise: has technical expertise, performs smoothly with precision and effectiveness; can adapt skills and design or develop new skills or procedures for new situations	C1	C1	C1		C1		C1		P1