

Programme Specification

BSc (Hons) Biomedical Science



1. Programme title	BSc (Hons) Biomedical Science
2. Awarding institution	Middlesex University
3. Teaching institution	Middlesex University
4. Details of accreditation by professional/statutory/regulatory body	
5. Final qualification	BSc (Hons) Biomedical Science BSc (Hons)/MSci Applied Biomedical Science BSc (Hons) Biomedical Science (Sandwich) DipHE in Biomedical Science
6. Year of validation Year of amendment	
7. Language of study	English
8. Mode of study	DipHE in Biomedical Science: Full-time or Part-time BSc (Hons) Biomedical Science: Full-time or Part-time BSc (Hons) Applied Biomedical Science: Full-time only BSc (Hons) Biomedical Science (Sandwich): Full-time or Part-time

9. Criteria for admission to the programme

Candidates normally require Maths and English equivalent to at least GCSE grade C as well as 280 to 300 A level tariff points or equivalent from one of the following awards.

A-levels (including two A2s with at least one science subject, preferably in biology or chemistry at grade C or better)

Or Two AVCEs or one double award in Science

Or EDEXCEL National Diploma or Certificate in biology, chemistry, forensic science, laboratory and industrial science, or medical science

Or Access course in applied science, clinical physiology, human or life sciences, medical or paramedical science, or science.

Or high school equivalent, such as an International Baccalaureate

Additionally, overseas students whose first language is not English will need a qualification that demonstrates competence in English, e.g. IELTS 6.0.

Applicants can make a claim for entry onto the programme with or without advance standing on the basis of either accreditation of prior certified learning or experiential learning.

CRB and health clearances are also required for Applied Biomedical Science. These must be achieved before transfer from the BSc in Biomedical Science. Students, who do not get either a CRB or health clearance, will not be able to transfer from the biomedical science programme. Applied Biomedical Science students, who attained at least 2ii, can progress onto the final year of the MSci providing that they have passed BMS4567.

10. Aims of the programme

The programme aims:

To help the student to develop the knowledge, skills, attitude and ethical values required providing patient-centred care and working safely and effectively in the NHS as a biomedical scientist.

To apply scientific principles and theories underpinning biomedical science to patient care.

To enable students to carry out competently diagnostic investigations relevant to the role of a biomedical scientist.

To develop the student's ability to apply scientific methods and approaches to research, development and innovation.

To help the student develop a range of transferable academic skills required for effective life-long learning, communication, team working and leadership.

To give the student an opportunity to gain work experience in a biomedical laboratory.

To prepare the student for employment in a biomedical science laboratory. To provide the student with the skills required for postgraduate studies in biomedical and health sciences.

11. Programme outcomes- DipHE

A. Knowledge and understanding

On completion of this programme the successful student will have knowledge and understanding of:

The scope of practice of biomedical scientist and skills required by a biomedical scientist to provide a high quality diagnostic service.

Normal and abnormal biological processes.

The principles of diagnosis and management of human disease

The importance of scientific research in the advancement of healthcare practice.

Teaching/learning methods

Students gain knowledge and understanding through lectures, seminars, laboratory classes, peer presentations, debates, placements in clinical physiology departments, designing and undertaking a research project, role-play and practical clinical sessions.

Assessment Method Students' knowledge and understanding is assessed by summative and formative assessment, including peer

presentations, laboratory reports, objective-structured practical examinations, online

Bioanalytical techniques used in clinical pathology and biomedical research.

BSc/MSc-

1. The scope of practice of biomedical scientist and skills required by a biomedical scientist to provide a high quality diagnostic service.
2. Normal and abnormal biological processes.
3. The principles of diagnosis and management of human disease.
4. The importance of scientific research in the advancement of healthcare practice.

Bioanalytical techniques used in clinical pathology

quizzes, and unseen theory examinations and assessment of clinical practice.

BSc/MSc-

Students gain knowledge and understanding through lectures, seminars, laboratory classes, peer presentations, debates, placements in clinical physiology departments, designing and undertaking a research project, role-play and practical clinical sessions.

Assessment Method Students' knowledge and understanding is assessed by summative and formative assessment, including peer

presentations, laboratory reports, objective-structured practical examinations, online quizzes, and unseen theory examinations and assessment of clinical practice.

B. Cognitive (thinking) skills

On completion of this programme the successful student will be able to:

Critically evaluate research evidence in the context of current theory or practice.

Solve clinical problems.

Appraise and synthesise information to gain new insights into aspects of current practice.

Reflect on own learning and practice to develop personally and professionally.

MSc/BSc-

Critically evaluate research evidence in the context of current theory or practice.

Solve clinical problems.

Appraise and synthesise information to gain new insights into aspects of current practice.

Reflect on own learning and practice to develop personally and professionally.

In addition, the MSci student will be able to:
Initiate, plan and execute a piece of independent work using the appropriate media, methods and techniques.

Debate ethical and legal issues in biomedical science.

Teaching/learning methods

Students learn cognitive skills through lectures, seminars, discussions, peer presentations, a research project and debates

Assessment Method Students' cognitive skills are assessed by formative and

summative assessment as written work, examinations, online quizzes, case studies, assessment of clinical practice and peer presentation

MSc/BSc

Teaching/learning methods Students learn cognitive skills through lectures, seminars, discussions, peer presentations, a research project and debates

Assessment Method Students' cognitive skills are assessed by formative and

summative assessment as written work, examinations, online quizzes, case studies, assessment of clinical practice and peer presentation

<p>C. Practical skills</p> <p>On completion of the programme the successful student will be able to:</p> <ul style="list-style-type: none"> • Present information in the most effective format to communicate ideas clearly. • – Not applicable. <p><i>Perform a wide range of common biomedical laboratory techniques competently, and in accordance with health and safety guidelines.</i></p> <p>BSc/MSc.</p> <ul style="list-style-type: none"> • Present information in the most effective format to communicate ideas clearly. • Design and undertake a research project. • Perform a wide range of common biomedical laboratory techniques competently, and in accordance with health and safety guidelines. • Work within scope of practice and professional codes of conduct. <p>The MSci student will also be able to: 5. Competently perform advanced biomedical laboratory techniques in accordance with health and safety guidelines</p>	<p>Teaching/learning methods</p> <p>Students learn practical skills through laboratory classes, clinical skills sessions, placements, and by undertaking a research project.</p> <p>Assessment Method Students' practical skills are assessed formatively and summatively through written work, case presentations, laboratory reports, online quizzes, and in objective structured practical examinations, and assessment of clinical practice.</p> <p>BSc/MSc-Teaching/learning methods Students learn practical skills through laboratory classes, clinical skills sessions, placements, and by undertaking a research project.</p> <p>Assessment Method Students' practical skills are assessed formatively and summatively through written work, case presentations, laboratory reports, online quizzes, and in objective structured practical examinations, and assessment of clinical practice.</p>
<p>D. Graduate skills</p> <p>On completion of this programme the successful student will be able to:</p> <ul style="list-style-type: none"> • Communicate their ideas clearly using a variety of media. • Work both collaboratively and with an appreciation of the skills required for leadership. • Demonstrate an autonomous and reflective approach to lifelong learning. • Formulate learning and career development plans. • Use a range of information technologies. • Demonstrate a high level of numeracy and problem-solving skills. <p>BSc/MSc</p> <ol style="list-style-type: none"> 1. Communicate their ideas clearly using a variety of media. 2. Work both collaboratively and with an appreciation of the skills required for 	<p>Teaching/learning methods</p> <p>Students acquire graduate skills through reading, group work, problem-based learning exercises, structured and directed learning, analysis of case studies, and through reflection, placement and development of portfolio material</p> <p>Assessment method Students' graduate skills are assessed formatively and summatively using written work in the form of portfolios, and also in case studies, presentations, project and research work, and online examinations</p> <p>BSc/MSc Teaching/learning methods Students acquire graduate skills through reading, group work, problem-based learning exercises, structured and directed learning,</p>

<p>leadership.</p> <p>3. Demonstrate an autonomous and reflective approach to lifelong learning.</p> <p>4. Formulate learning and career development plans.</p> <p>5. Use a range of information technologies.</p> <p><i>Demonstrate a high level of numeracy and problem-solving skills.</i></p>	<p>analysis of case studies, and through reflection, placement and development of portfolio material</p> <p>Assessment method Students' graduate skills are assessed formatively and summatively using written work in the form of portfolios, and also in case studies, presentations, project and research work, and online examinations</p>
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12. Programme structure (levels, modules, credits and progression requirements)

12.1 Overall structure of the programme

The BSc(Hons) Biomedical Science can be studied over three years full time, or part-time over five years. In contrast, the mode of study for the BSc (Hons) Applied Biomedical Science is three years full time only. The BSc(Hons) Biomedical Science (Sandwich) can be completed in four-years full-time. DipHE is 240-credit points attained over 2 years full-time or three years part-time.

They are modular programmes. Each module has a credit value of 15 or 30 credits, with the exception of the sandwich Placement Module, which is worth 120 credits. Except for the Applied Biomedical Science programme, students take 120 credit points per year. The students on the Applied Biomedical Science programme take an additional 30-credit placement module in year two and three. The total credit required for each award are as follows:

BSc(Hons) Applied Biomedical Science – 420 credit points

BSc(Hons) Biomedical Science – 360 credit points

BSc(Hons) Biomedical Science (Sandwich) – 480 credit points
DipHE Biomedical Science – 240 credit points

After year 2, Applied Biomedical Science student with 2ii or better profile can progress onto the MSci. These students will take the BMS4567 placement module instead of the BMS3566 placement module and do an additional fourth year.

12.2 Levels and modules

Level 4 (1)

COMPULSORY

OPTIONAL

PROGRESSION
REQUIREMENTS

<p>Students must take all of the following:</p> <p>All students must take all of the following:</p> <p>BMS1154 BMS1654 BMS1514 BMS1854 BMS1994</p>		
Level 5 (2)		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
<p>Students must take all of the following:</p> <p>BMS2005 BMS2225 BMS2125 BMS2135 BMS2145 BMS2515</p> <p>BMS2555 (Only the BSc in Applied Biomedical Science)</p>		<p>Normally all modules must be passed but a marginal failed module may be compensatable in accordance with University regulations.</p>
Level 6 (3)		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS

<p>Students must take all of the following: Students on the BSc programmes must also take the following: BMS3136 BMS3326 BMS3336 BMS3346 or BMS3347</p> <p>BMS3006 (Only the BSc in Biomedical Science (Sandwich))</p> <p>BMS3567 (Only the BSc in Applied Biomedical Science)</p>	<p>none</p>	<p>All modules must be passed</p>
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Level 7		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
<p>MSci students must take the following: BMS4567 BMS4777 BMS4977 BMS4367</p>	<p>There are no optional modules. :</p>	<p>All modules must be passed.</p>

12.3 Non-compensatable modules (note statement in 12.2 regarding FHEQ levels)

Module level	Module code
5	BMS2515
6	All
7	BMS4367

13. Curriculum map

See attached.

14. Information about assessment regulations

The assessment regulations are the general university regulations.

A grade of at least 30% for a failed component is required before the grade can be included in the aggregation of the overall module grade..

15. Placement opportunities, requirements and support (if applicable)

Applied Biomedical Science

Students are only placed in University approved learning environments. Placement Tutors in collaboration with placement providers will ensure that learning opportunities and support will be available in the placement area to help students meet the module learning outcomes and HCPC Standards of Proficiency. . An academic from the University visits the student on placement to monitor the student's progress. Both parties will also ensure that a robust quality monitoring processes will be in place and establish clear lines of communications.

Before students can transfer from the Biomedical Science programme, they must get an enhanced DBS and Occupational Health clearance. Placement is unpaid.

Students are notified in advanced of their placement allocation and contact details of placement staff. Students are also required to attend placement on weekdays that they are not studying at the university.

At the start of each placement, students will receive an induction and support and guidance will be provided for students with diverse needs.

Each placement area is assigned a Placement Tutor and given a copy of the placement handbook, which outlines for example lines of communication, contact details of key academic staff, attendance policy and complaint procedures. Practice learning is assessed using the training manual and written assignments.

In the final year, students have an opportunity to undertake a research project, which could include a clinical audit. Research projects carried out on placement will normally require local ethical approval.

Sandwich Route

Students can go on a year-long placement in year 3 but they must secure programme a placement by the end of year 2. Possible placements include commercial laboratories, research laboratories or NHS pathology laboratories outside London.

16. Future careers (if applicable)

Biomedical science graduates can gain employment in a wide variety of settings, particularly laboratory-based work. Graduates could be employed in the National Health Service, pharmaceutical, forensic, Public Health, veterinary, agriculture or university laboratories; others may obtain posts in sales and marketing of biomedical products, or in education at all level.

17. Particular support for learning (if applicable)

Specialist laboratory facilities available on site to learn and develop practical skills

Online support for all modules in the programme available on My Learning resource facilities at the University including computing suites and internet access

Access to English Language and Learning Support on campus
Dyslexic support

18. JACS code (or other relevant coding system)

C700
BSc(Hons)
Biomedical
Science C701
BSc (Hons)
Applied
Biomedical
Science
C702 BSc
(Hons)
Biomedical
Science
(Sandwich)
MSci Applied Biomedical Science

19. Relevant QAA subject benchmark group(s)

Biomedical Science

20. Reference points

The following reference points were used in designing the Programme:

Internal documentation:

Middlesex University (2006) *Learning Framework Document* Middlesex University (2013) *Middlesex University Regulations*. MU Middlesex University (2011) *CLQE Handbook*. MU

External Documentation:

Department of Health (DH) (2010) *Modernising Scientific Careers Programme BSc (Hons) in Healthcare Science (Life Sciences), Learning Outcomes and Indicative Content 2010/11*. DH Institute of Biomedical Science (IBMS) (2012) *Criteria and requirements for BSc (Hons). MSc degrees in biomedical science(s) and top-up qualifications*. IBMS

Quality Assurance Agency (2001) *The QAA Framework for framework for higher education qualifications in England, Wales and Northern Ireland*. QAA

Quality Assurance Agency (2007) *Code of practice for the assurance of academic quality and standards in higher education - Section 9: Work-based and placement learning*. QAA

Quality Assurance Agency (2007) *Subject Benchmark Statements for Biomedical Science*. QAA

21. Other information

Please note programme specifications provide a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve if s/he takes full advantage of the learning opportunities that are provided. More detailed information about the programme can be found in the student programme handbook and the University Regulations.

Appendix 2: Curriculum Map

