

Programme Specification

Award and title: MSc Biomedical Sciences

<i>School:</i>	Health Sciences
<i>Subject area:</i>	Biomedical Science
<i>Entry from academic year:</i>	2027-28
<i>in the month(s) of</i>	September
<i>Awarding institution:</i>	York St John University
<i>Teaching institution:</i>	York St John University
<i>Delivery location:</i>	York St John University
<i>Programme/s accredited by:</i>	NA
<i>Exit awards:</i>	Postgraduate Certificate in Biomedical Sciences Postgraduate Diploma in Biomedical Sciences
<i>UCAS code / GTTR / other:</i>	NA
<i>Joint Honours combinations:</i>	No
<i>QAA subject benchmark statement(s):</i>	NA
<i>Mode/s of study:</i>	Full Time for 1 calendar year
<i>Language of study:</i>	English
<i>Paired with Foundation Year</i>	No
<i>Study abroad opportunities:</i>	No
<i>Opt-in YSJU Placement Year opportunity:</i>	No
<i>Excluding a year-long placement/professional experience, are there placement/field trip/work experience(s) totalling 20 days or more?</i>	No

Introduction and special features

The expansion in our understanding of the molecular basis of cancer has developed significantly via several paradigm shifts over the past three decades, providing new avenues for therapeutic intervention and disease management. Clinically, there has been a pivot away from the traditional cytotoxic and cytostatic chemotherapeutics that are used to indiscriminately damage rapidly dividing cells, whether cancerous or not. Instead, recent focus has been on the development of precision medicines to target various molecular vulnerabilities and cancer-specific genomic, epigenetic, and proteomic signatures.

The continual discovery of key biochemical and genetic differences within cancers supports the modern approach of targeting specific molecules involved in oncogenesis and metastasis. Molecular profiling and in-depth genomic analysis are providing exciting new therapeutic avenues for tailored adjuvant and neo-adjuvant treatments. Our improved understanding of the biology of cancer is driving the development of novel intervention strategies, culminating in new targeted therapeutic and immunotherapy approaches.

The MSc Biomedical Sciences has been developed to equip graduates with advanced knowledge and research skills in oncology, drug discovery, and translational medicine. The rationale lies in both the scientific and societal need: cancer remains a leading cause of global mortality, and the rapid growth of

immunotherapy, precision medicine, and biologics demands specialists who can bridge fundamental science and clinical application.

The MSc is designed to attract biomedical science and biological science graduates, and healthcare professionals, for example, pharmacists, junior doctors, clinical scientists, and international students who are seeking to specialise in cancer research or prepare for doctoral study, as well as healthcare professionals looking to upskill in cancer biology and therapeutic applications.

During this programme, you will develop a detailed understanding of the molecular basis of cancer, and the various immunotherapy and targeted therapy approaches available. You will explore the design and mechanisms of action of new treatments; alongside how modern precision therapies are increasingly utilised in combination with classical chemotherapies to provide improved clinical benefit.

This MSc offers an intensive, research-informed pathway into one of the most dynamic areas of modern medicine. What makes this programme distinctive is its focus on bridging molecular science, pharmacology, and real-world clinical applications, equipping graduates with the skills to engage in the discovery and delivery of cutting-edge cancer treatments. You will benefit from teaching led by active researchers, opportunities to engage with current case studies and ethical debates in oncology, and research projects embedded in staff laboratories.

Our one-year format is designed to provide ambitious graduates and professionals with a fast-track qualification that enhances employability and prepares them for progression into PhD research, biotech and pharmaceutical careers, or advanced clinical roles. At York St John University, you will join a supportive, close-knit academic community where dialogue, inclusivity, and research-led learning are central. With a strong emphasis on agency, you are encouraged to shape your own research interests while developing the critical and practical skills needed to make an impact in cancer research and therapeutics.

Admissions criteria

You must meet the University's general entry criteria for [postgraduate study](#).

In addition, you must have:

- A 2:2 in Biomedical Sciences, Bioscience, Pharmacy, Biological Science, or a closely-related discipline. Applicants whose first degree is not in these disciplines will be reviewed on a case-by-case basis to ensure that they have covered sufficient levels of bioscience-related skills and knowledge, alongside research methods during their first degree.

Applicants whose first language is not English should have IELTS at grade 6.5 or above (including a minimum of 6.5 in the writing component) or another acceptable English Language qualification.

If your first language is not English, you need to take an IELTS test or an equivalent qualification accepted by the University (see <https://www.yorksj.ac.uk/international/how-to-apply/english-language-requirements/>).

If you do not have traditional qualifications, you may be eligible for entry on the basis of [Recognition of prior learning \(RPL\)](#). We also consider applications for entry with advanced standing.

Programme aim(s)

1. Equip students with advanced research knowledge, transferable skills, and practical experience to pursue a career in cancer research and advanced therapeutic design.

- Engage students in the development of essential research and analytical skills to critically interpret and evaluate experimental, clinical, and research-related information consistent with the rapidly evolving field of cancer research.
- Provide an immersive experience of designing, undertaking, analysing, and reporting research that is rigorous, valid, and impactful.

Programme learning outcomes

Upon successful completion of the programme students will be able to:

Level 7

- Demonstrate critical and comprehensive understanding of a range of contemporary research methods, concepts, information, and techniques used in cancer research, and oncology, translatable to the wider biomedical sciences field.
- Apply systematic understanding to critically analyse the molecular, biochemical, cellular, tissue, and organ level alterations involved in the development and treatment of cancer.
- Critically appraise and discuss, research, experimental, and clinical evidence in cancer research and therapeutic design to examine the strengths, weaknesses, rigour, quality, bias, and areas of novel research transferable to other areas of biomedical sciences practice.
- Design, conduct, and manage novel, independent research in cancer biology and applied therapeutics by deploying appropriate experimental design and methodological approaches, considering research ethics, research governance, and adhering to regulatory standards.
- Communicate original research findings through proficient structuring, writing, and presenting of complex ideas related to understanding disease development and therapeutic approaches, while meeting contemporary standards for open, transparent, and high-quality research.

Programme structure

Code	Level	Semester	Title	Credits	Module Status	
					compulsory (C) or optional (O)	non-compensable (NC) or compensable (X)
BIO7001M	7	1&2	Molecular Basis of Cancer and Cancer Pharmacology	30	C	X
BIO7002M	7	1&2	Preclinical Modelling & Experimental Design	30	C	X
BIO7003M	7	1	Critical Appraisal	30	C	X
BIO7004M	7	2	Research & Analytical Methods	30	C	X
BIO7005M	7	3	Research Project	60	C	NC

Any modules that must be passed for progression or award are indicated in the table above as non-compensable. A non-compensable module is one that must be passed at the relevant level (with a mark of 50 for PG) to progress.

Learning, teaching and assessment

Teaching will be delivered through a diverse mix of lectures, laboratory sessions, case-based learning, data evaluation tutorials, and research projects embedded in our Disease Detection and Prevention research group and Institute for Health and Care Improvement (IHCI). Through a series of four taught 30-credit

modules across Semester 1 and 2, you will develop a detailed understanding of the biology of cancer and the varied treatment approaches. These modules will provide the research skills and knowledge of good experimental design required to successfully undertake the 60-credit research project module in Semester 3, which culminates in the production of a research paper reporting the findings of your novel research. You will gain the ability to critically evaluate and apply current research practice, while considering the importance of sound research design, ethical processes, research governance, and impact for public benefit.

Assessments are varied and aligned to contemporary research methods and professional practice, with emphasis on research and information literacy, communication, and critical evaluation skills. The assessment approach is designed to evaluate both theoretical knowledge and practical research skills, ensuring you are well-prepared for the real-world challenges of a career in research. Examples of formative activities include structured abstract writing exercises, progress presentations, reflective research logs and peer review activities, whilst summative assessments consist of poster development, academic writing, portfolio development and undertaking a research project. It embeds employability, entrepreneurship, research-informed content, and student success throughout the programme, emphasising community, inclusivity, and student agency. You will also engage critically with the ethical and social dimensions of cancer care while benefiting from the scholarship and professional practice of research-active staff.

Progression and graduation requirements

The University's [regulations](#) for taught postgraduate awards apply to this programme.

Any modules that must be passed for progression or award are indicated in the Programme Structure section as non-compensable.

Further information on eligibility for University awards and graduation is available in the [Code of Practice for assessment](#).

Internal and external reference points

This programme specification was formulated with reference to:

- [University Mission, Culture and Values](#)
- [University 2026 Strategy](#)
- [QAA subject benchmark statements](#)
- [Frameworks for Higher Education Qualifications](#)
- [Freedom of Speech Code of Practice](#)
- [The University's Approach to Dignity and Respect](#)

Date written / revised: December 2025

Programme originally approved: 25 March 2026