



Programme Specification

Health Technology [Sep][PT][Frenchay][2yrs]

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Section 1: Key Programme Details

Part A: Programme Information

Programme title: Health Technology [Sep][PT][Frenchay][2yrs]

Highest award: MSc Health Technology

Interim award: PGCert Health Technology

Interim award: PGDip Health Technology

Awarding institution: UWE Bristol

Affiliated institutions: Not applicable

Teaching institutions: UWE Bristol

Study abroad: No

Year abroad: No

Sandwich year: No

Credit recognition: No

Department responsible for the programme: HAS Dept of Applied Sciences,
Faculty of Health & Applied Sciences

Contributing departments: Not applicable

Professional, statutory or regulatory bodies: Not applicable

Apprenticeship: Not applicable

Mode of delivery: Part-time

Entry requirements: For the current entry requirements see the UWE public website

For implementation from: 14 September 2020

Programme code: I590-SEP-PT-FR-I590

Section 2: Programme Overview, Aims and Learning Outcomes

Part A: Programme Overview, Aims and Learning Outcomes

Overview: The MSc in Health Technology has been developed to address key strategic drivers from the Industrial Strategy and Topol Review, that call for graduates with multidisciplinary skills to use data, artificial Intelligence (AI) and digital Technology/innovation to transform the prevention, early diagnosis and treatment of chronic disease. At UWE, this programme is ideally placed given our already thriving collaborative network between the Health Tech Hub, the Robotics Institute, the Faculty of Engineering and Technology and the Faculty of Health and Applied Sciences. We are located in the hub of the South West and the centre of numerous small to medium enterprises (SMEs), allowing access to novel and emerging technologies. You will therefore benefit from strong industry links on our doorstep, within Bristol's thriving technology centre.

Specifically, this programme is a one-year full-time postgraduate programme (2 year part-time) that integrates biosciences, AI, robotics and Healthcare, inviting students from a broad range of disciplines to diversify and expand their knowledge cross discipline. A core strength of this programme is that it emphasizes and values the importance of inter-disciplinary and collaborative approaches that will drive the future of Health Technology. It provides the core knowledge to allow you to apply AI and data analysis to formulate novel approaches to address key challenges in the Healthcare sector. The degree also offers flexibility to choose more in-depth training in AI and robotics, where you will learn state-of-the art deep machine vision learning with world-leading experts. There is also an exciting opportunity to develop skills in Health Technology business development taking an idea through design, development and implementation.

The integration of a multi-disciplinary research project that spans several Faculties offers you a unique experience of world-leading research at the cutting edge of new technologies. The programme has also been designed to meet the criteria for accreditation by the Institute of Biomedical Science (IBMS) and Institute of

Leadership and Management (ILM). Together, the skills developed and mastered throughout this programme will enhance employability across a wide range of sectors.

Educational Aims: This programme aims to provide:

A multi-disciplinary degree that provides the skills required to interchange from “Health to Tech” and “Tech to Health”.

A culture of inclusivity and diversity with a goal towards innovative Health Tech design, driven by the inter-disciplinary teams leading this programme.

An understanding of how new advances in technology are governed by regulatory bodies and frameworks.

A comprehensive account of how AI, robotics and cyber security can be applied to address challenges in the diagnosis and treatment of chronic disease conditions.

A multi-faceted approach to Health Technology development, supporting collaborative and leadership skills.

An extended research project that supports a multi-disciplinary approach to address technological gaps in the Health sector that embraces the importance of independent and group learning.

Programme Learning Outcomes:

Programme Learning Outcomes

- PO1. Apply a machine learning approach to better utilise digital data that demonstrates a wider knowledge of basic programming and algorithms.
- PO2. Critically evaluate regulatory frameworks that govern the Health Sector landscape and apply to the design of new innovative technologies.

- PO3. Critically evaluate the clinical utility of current diagnostic and prognostic tools and synthesize innovative solutions using advances in AI and digital technologies.
- PO4. Interpret quantitative research methodology and apply statistical techniques in empirical research.
- PO5. Appreciate the importance of Research Governance and how it must inform and influence the design of Health Technology
- PO6. Employ cross-disciplinary skills that promotes collaborative approaches using AI and digital technology that addresses Health Technology challenges.
- PO7. Formulate business plans and create presentations that showcase innovation and leadership.

Part B: Programme Structure

Year 1

The student must take 90 credits from the modules in Year 1.

Year 1 Compulsory Modules

The student must take 90 credits from the modules in Compulsory Modules.

Module Code	Module Title	Credit
UFMFEV-30-M	AI and Computer Vision, Application in Healthcare 2020-21	30
USSJKX-15-M	Disease, Diagnosis and Monitoring 2020-21	15
USSJLF-30-M	Innovative Technology in Healthcare 2020-21	30
UFMFGV-15-M	Research Methods 2020-21	15

Year 2

The student must take 90 credits from the modules in Year 2.

Year 2 Compulsory Modules

The student must take 60 credits from the modules in Compulsory Modules.

Module Code	Module Title	Credit
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USSJLJ-60-M	Extended Research Project 2021-22	60
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Year 2 Optional Modules

The student must take 30 credits from the modules in Optional Modules.

Module Code	Module Title	Credit
UFCFFV-15-M	Advanced AI, Computer Vision and Cyber Security 2021-22	15
UFMFSR-15-M	Assistive Robotics 2021-22	15
USSJM6-15-M	Enterprise and Innovation 2021-22	15
USSJLH-15-M	Smart Sensing 2021-22	15

Part C: Higher Education Achievement Record (HEAR) Synopsis

Successful graduates will have an in-depth knowledge of the application of AI, robotics and cyber security to address chronic health challenges. Their knowledge of the Healthcare landscape, regulatory frameworks and how new innovative technology has to be designed in a manner that considers human factors (mechanical and psychological) will be fundamental when employed in the NHS, small to medium enterprises (SMEs) or related industries. Graduates will have benefited from working with world-leading experts in Biosciences, AI and Robotics in state-of-the art facilities. The analytical and practical underpinning that is core through every module will provide the students with transferrable skills adaptable to numerous career points. The inter-disciplinary group project that promotes leadership and collaboration across disciplines and consequently will be excellent preparation for careers in this complex and highly connected arena.

Part D: External Reference Points and Benchmarks

The learning outcomes have been designed with the QAA Framework for Higher Education Qualifications in mind. Moreover, the following has also been considered:

QAA UK Quality Code for HE (October 2019)

Framework for higher education qualifications (FHEQ)

Subject benchmark statement for Higher Education qualifications in engineering (Feb 2015)

Strategy 2030

University policies

Staff research projects.

As there is not a specific QAA benchmark statement for the MSc in Health Technology, the programme team has referred to the QAA benchmark for Biomedical Science, Masters Level for Engineering and Health Studies. These benchmarks offer guidance on the level of practice-led skills, communication skills that can be expected of graduates in these disciplines, which is inclusive of the cross-disciplinary nature of the programme. The important elements from these Benchmark statements have been collated in the Benchmarks document, and attached as an appendix to the programme record.

Part E: Regulations

A: Approved to University Regulation and Procedures.