

BIOMEDICAL ENGINEERING (ON-CAMPUS - SEPTEMBER START) (MSc/PgDip/PgCert)
57H16SB1/ 61H16SVX/ 62H16SVZ

Duration: MSc 12 months full-time; PgDip 9 months full-time; PgCert 4 months full-time.

Content: The programme aims to provide students with a broad-based education in core aspects of engineering in medicine and biology. Students will learn to apply core engineering principles to the understanding and advancement of medical and healthcare technologies to solve important clinical problems. The foundations of medical engineering will be studied alongside cutting-edge technologies used in medical devices and healthcare delivery, giving students the opportunity to understand the clinical context and evaluate the opportunities for future development.

Students will undertake the project and complete the dissertation in Biomedical Engineering which will be defined to be clinically or industrial relevant.

Candidates shall be required to attend the following designated programme of courses:

FULL TIME ROUTE

Stage 1

BP5003 Biomedical and Professional Topics in Healthcare Science (15 credit points)
EG505J Fundamentals of Engineering in Medicine (15 credit points)
EG505K Biomaterials for Medical Devices and Implants (15 credit points)

Plus one from the following:

EG501V Computational Fluid Dynamics (15 credit points)
EM501Q Advanced Composite Materials (15 credit points)
BT5015 Introduction to Bio-Business and the Commercialisation of Bioscience Research (15 credit points)

Stage 2

EG555J Research Methods for Bioengineers (15 credit points)
EG555L Modelling of Biological Systems (15 credit points)
EG555K Rehabilitation Engineering and Biomechanics (15 credit points)

Plus one from the following:

EG55M1 Finite Element Methods (15 credit points)
EG551T Mathematical Optimisation (15 credit points)
BT5508 Advanced Bio-Business and the Commercialisation of Bioscience Research (15 credit points)

Stage 3

EG595D Individual Project in Biomedical Engineering (60 credit points)

Assessment: By a combination of written examination and course work as prescribed for each course. In addition, MSc candidates must submit a dissertation on their individual project and may be required to undergo an oral examination. The Degree of MSc shall not be awarded to a candidate who fails to achieve a CGS Grade of D3 or above in the individual project, irrespective of their performance in other courses.