

As a biomedical engineer, it might be difficult to study abroad and still take the required courses for your major. However, there are a variety of host institutions that allow you to fulfill course requirements and experience the cultural diversity of studying in Britain, Ireland, or South Africa. The following is just a sample of courses available. You can contact Interstudy for a complete listing and more information at 800.663.1999.

BRITAIN

Queen Mary, University of London

DENM009 Medical Ethics, Law and Regulatory Practice in Bioengineering

This module provides an introduction to applied medical ethics and law related to the development of new products in the field of bioengineering. It provides knowledge of the regulatory mechanisms of approval of products for clinical use in the UK, the EU and the USA.

Other Courses Offered:

DEN430 Biomedical Engineering in Urology

MAT306 Functional Materials in Medical Engineering

DEN328 Biomechanics

DEN406 Clinical Measurements

IRELAND

National University of Ireland, Galway

ME416 Biomechanics

This course builds on students' previous knowledge and experience of anatomy, physiology and interaction of various systems of the human body. These aspects are further reinforced as part of the curriculum before new principles and aspects are introduced. It is the aim of this module to develop students' perception and appreciation of mechanical principles present in the human body and to understand their effect on the body's adaptation to external loads. These principles are applied to both the cardiovascular and orthopaedic system. In case of the cardiovascular system, the focus lies in the study of the effects of pressure within thin-walled vessels and the role of the individual vessels structure and function. Numerical problems are extensively used to strengthen students' understanding of sequence of events that take place in the human body and its various systems and tissues in response to externally applied stimuli. The focus is thereby laid out on the biomechanics of muscle, skin, tendon and ligament, cartilage, bone, blood vessels and peripheral and spinal nerves. Time-dependent response to loads and effects of viscoelasticity are analysed and students experience these effects in labs carried out on biological material. Wolff's law is used to describe tissue remodelling and the effects of loads on the macroscopic structure of tissues. The major joints of the appendicular skeletal systems are reviewed and principles of gait analysis and ground reaction force systems are outlined.

Other Courses Offered:

ME417 Biomedical Production and Environmental Services

ME421 Medical Implant and Device Design

ME422 Tissue Engineering

ME424 Energy Conversion

SOUTH AFRICA

University of the Witwatersrand

CHMT3017 Biomedical Transport Phenomena

Introduction to mass transfer and its application to biological systems. Analysis of lung and kidney function as well as other mass transfer organs. Aspects of pharmacokinetics. Artificial organ design. Biological fluid flow and cardiovascular dynamics.

Other Courses Offered:

APPM2013 Biomedical Statistics and Numerical Methods, ELEN3014 Biomedical Signals, Systems and Control, ELEN3008 Biomedical Measurement, Instrumentation and Imaging, HAEM2001 Molecular and Cell Biology for Biomedical Engineers