

Course Title/Code:	Basic Medical Bioengineering (MMPH6124)
Course Coordinator:	Dr Victor Leung (vicleung@hku.hk) Tel: 3917 6985 Department of Orthopaedics & Traumatology
Delivery Mode:	Face-to-Face
Venue:	MWT3, G/F, Meng Wah Complex, Main Campus
Objectives:	Biomedical engineering is the application of concepts and methods of physical sciences and mathematics in an engineering approach to address problems in medical sciences often, but not exclusively, concerned with injuries and diseases. This course aims to introduce latest technologies pertaining to biomedical engineering and their application in basic and clinical research.
Content:	Topics cover areas complementary to fundamental engineering courses with an emphasis on applications in biological and medical sciences, including basic biomechanics, bioimaging, biomaterials, tissue engineering, and bioelectronics. This course also introduces advanced technologies currently adopted in biomedical research.
Prerequisites:	Students are expected to have university level training in physics, chemistry and mathematics. Some basic understanding of biology is preferred.
Learning outcomes:	<ol style="list-style-type: none"> 1) Understanding the principle and application of biomechanics, bioimaging, biomaterials, tissue engineering and bioelectronics. 2) Being able to apply these principles and methods in biomedical research. 3) Learning the application of advance instrumentation such as motion analysis, biomechanical testing, imaging and optical instruments in research settings. 4) Being able to appraise the potential and limitations of medical bioengineering. 5) Formulating a study with a multidisciplinary design.
Remarks:	<ol style="list-style-type: none"> 1) Offer opens to RPg from all Faculties in HKU. 2) A minimum of 5 students required.