

436-570 Musculoskeletal Biomechanics

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2009.
Time Commitment:	Contact Hours: 36 Hours; Non contact time commitment 84 Hours Total Time Commitment: Not available
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	<p><p>For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.</p> <p><p>It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability</p></p> </p>
Subject Overview:	Body segmental Dynamics, Forward/ Inverse Dynamical Analyses, Musculoskeletal Geometry, Muscle Force and Action, Musculotendon Dynamics, Modeling Musculotendon Actuation, Linear Models for Musculotendon Actuation, Activation Dynamics, Mechanical Properties of Tendons and Ligaments, Estimating Musculotendon Forces, Biomechanics of Walking, Running, & Jumping, Joint Biomechanics, Orthopaedic Surgical Procedures, Orthopaedics of Total Joint Replacement
Objectives:	-
Assessment:	One end-of-semester examination paper of three hours (70%) in addition to continuous assessment 2000 words (30%).
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<p>On successful completion, students should:</p> <ul style="list-style-type: none"> # be skilled at applying a range of mathematical and numerical methods to the dynamical analysis of the musculoskeletal system # understand the physiology and biomechanics of locomotion # be familiar with current methods of joint replacement in orthopaedic surgery
Notes:	This subject is not available in 2009, however it may be available in 2010.
Related Course(s):	Master of Biomedical Engineering