

436-388 Introduction to Biomechanics

Credit Points:	12.500
Level:	Undergraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 1, - Taught on campus.
Time Commitment:	Contact Hours: Thirty-two hours of lectures, 12 hours of tutorials. Total Time Commitment: It is expected that students will commit at least 96 hours of private study in addition to their formal contact time.
Prerequisites:	436-121 Introduction to Mechanical Engineering and 431-202 Engineering Analysis B or equivalent.
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>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>
Coordinator:	Marcus Pandy
Subject Overview:	<p>This subject provides an introduction to the biomechanics of human movement. At the completion of the subject, students will be able to: 1. Understand the basic concepts of mechanics and appreciate the ways in which they can be applied to the study of human movement; 2. Describe some of the common experimental methods used in human movement studies; 3. Describe and be able to apply some of the theoretical methods used to analyse human movement.</p> <p>Topics covered include kinematics and dynamics of particles and rigid bodies; kinematic measurement techniques; processing of kinematic measurements; anthropometric properties of body parts; force and moment of force; equations of motion; force and strain measurements in biomechanics; work, energy and power in movement.</p> <p>Subject Objectives:</p> <ul style="list-style-type: none"> # To learn the basic concepts of mechanics and appreciate the ways in which they can be applied to the study of human movement; # To learn about some of the common experimental methods used in human movement studies; # To learn and be able to apply some of the theoretical methods used to analyse human movement.
Assessment:	One 2-hour end of semester written examination (40%), and 1-hour mid-term examination (20%) and 4 homework assignments distributed throughout the semester (40%).
Prescribed Texts:	Biomechanics and Motor Control of Human Movement, D.A. Winter, Wiley Publication, 2nd Edition, 1990.
Recommended Texts:	Information Not Available

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:	<ul style="list-style-type: none"> # ability to apply knowledge of basic science and engineering fundamentals # in-depth technical competence in at least one engineering discipline # ability to undertake problem identification, formulation and solution # expectation of the need to undertake lifelong learning, capacity to do so # capacity for independent critical thought, rational inquiry and self-directed learning.
Related Course(s):	Bachelor of Engineering (Biomedical) Biomechanics Bachelor of Engineering (EngineeringManagement)Mechanical&Manufacturing Bachelor of Engineering (Mechanical &Manufacturing)/Bachelor of Commerce Bachelor of Engineering (Mechanical and Manufacturing Engineering)