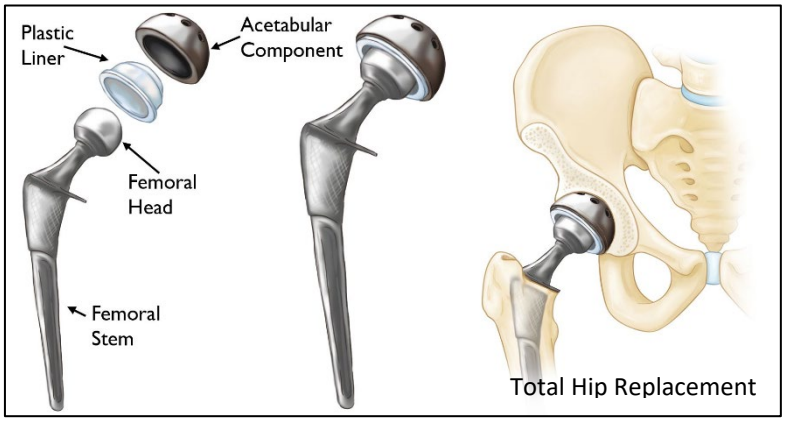
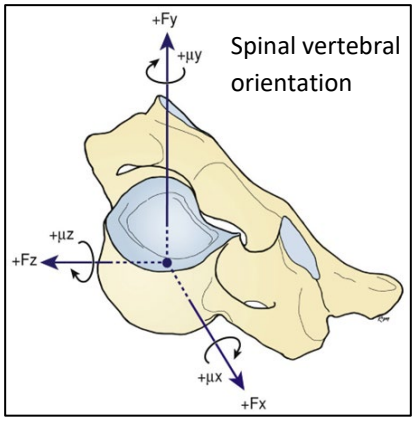
BN5202 ORTHOPAEDIC BIOMECHANICS

WHAT IS THIS COURSE ABOUT?

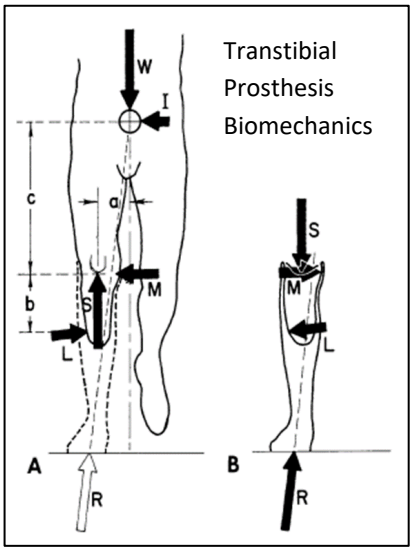
The objective of this course is to provide an understanding of the engineering-based problems encountered in Orthopaedic practice. It will cover the structure and function of the musculoskeletal joints (e.g. hip, knee, shoulder) and tissues (such as bone, cartilage, ligament) and will explore the forces and moments that act on the musculoskeletal system, and how they relate to tissue regeneration and repair. The course will also look at the biomechanics of joints of the human body and the use of Orthopaedic implants for reconstruction and repair of articular joints. Finally, the student is introduced to limb amputation surgery and the prosthetic limb replacement from an engineering perspective. This course will be taught by Emeritus Professor James Goh (biegohj@nus.edu.sg).





WHY YOU SHOULD CONSIDER THIS COURSE

This course will give you an introduction to musculoskeletal joints and tissues. It will also teach you how to apply engineering analytical techniques to Orthopaedic prosthesis-related problems, including factors related to the design of total joint replacement and techniques used to assess their performance. You will also learn about the design of lower limb prosthetics from an engineering perspective.



NUS National University of Singapore
College of Design and Engineering
Department of Biomedical Engineering