

PHTY90076 Motor Control, Performance & Exercise

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus. Campus based lectures, tutorials and seminars
Time Commitment:	Contact Hours: 30 Hours Total Time Commitment: 80 hours of self-directed learning
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	None
Coordinator:	Dr Adam Bryant
Contact:	Dr Adam Leigh Bryant
Subject Overview:	This subject will provide students with an opportunity to explore the theoretical concepts related to motor control and motor performance within the context of evidence-based physiotherapy clinical practice. Topics covered include: the mechanical properties, physiological structure and neural activation of muscles; the effects of ageing, immobilization, disuse, training, fatigue and spasticity on motor performance; the response of body systems to exercise; and the principles of motor skill learning. Students will be encouraged to apply these principles to their own physiotherapy practice across a broad range of clinical specialty areas.
Objectives:	Students who successfully complete this subject will have had the opportunity to: <ul style="list-style-type: none"> # Acquire theoretical knowledge of muscle physiology including muscle structure, mechanical properties, fibre types, neural activation, soreness, damage and adaptation, and the effects of ageing, immobilization, disuse, training, fatigue and spasticity on motor performance. # Acquire theoretical knowledge of exercise physiology including exercise metabolism, cardio-respiratory response to exercise, energy, nutrition and environmental factors in exercise # Develop evidence-based therapeutic exercise interventions for clinical populations # Develop an understanding of the physiology of motor control and its application to physiotherapy clinical practice # Acquire theoretical knowledge of the principles of motor skill learning (and relearning), and the ability to implement these principles in physiotherapy clinical practice # Develop a thorough understanding of factors influencing learning including the learner and the environment, and how these factors can be to applied clinical practice situations # Critically evaluate physiotherapy clinical practice using current research and professional literature in the area of exercise and motor learning
Assessment:	2 written assignments as follows;1,500 word critical review of clinical research related to motor control and motor performance, due mid-semester (30%)3,500 word essay presenting a critical analysis of physiotherapy clinical practice using current research and professional literature in the area of motor control and motor performance, due at the end of semester (70%)
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>Students who successfully complete this subject will have had the opportunity to:</p> <ul style="list-style-type: none"># Develop an appreciation of the team approach to learning in complex areas# Develop an appreciation of the importance of, and development of, good written and verbal communication skills to articulate knowledge in exercise and motor learning# Build on their ability to evaluate and synthesise research and professional literature, and apply this information to novel situations