MEDI90049 Principles of Ultrasound Heart Scan

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Hawthorn This subject commences in the following study period/s: Semester 1, Hawthorn - Taught online/distance. Semester 2, Hawthorn - Taught online/distance. This subject will be taught off-campus (online)Course materials will be distributed via mail to students.
Time Commitment:	Contact Hours: 120 Total Time Commitment: Not available
Prerequisites:	Nil
Corequisites:	Nil
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering requests for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
Contact:	Postal Address: Cardiovascular Therapeutics Unit Department of Pharmacology University of Melbourne Parkville VICTORIA 3010 Telephone: +61 3 8344 5673 Fax: +61 3 8344 5193 Email Address: **echo-info@unimelb.edu.au (mailto:echo-info@unimelb.edu.au)**
Subject Overview:	This subject will outline a physics related to medical ultrasound use; an introduction to transthoracic echocardiography using the focused assessment technique HEARTscan (Haemodyanmic Echocardiography Assessment in Real Time). Topics include: 1 the role of Echocardiography in Perioperative and Critical Care Medicine 2 Optimising Ultrasound Images (Knobology) 3 Physics/Modes of Ultrasound/Transducers 4 Anatomy of the Heart 5 Anatomy of the Valves 6 Comprehensive Transthoracic Echocardiography Examination 7 Basic Haemodynamic State Assessment 8 HEARTscan Valves 9 HEARTscan Case Studies 10 Comprehensive Transoesophageal Echocardiography Examination Artefacts
Objectives:	The completion of the subject, students should: 1 Understand the physics related to ultrasound generation 2 Understand the different modes of ultrasound, including M-mode, two-dimensional imaging, Doppler ultrasound and colour flow mapping 3 Understand transducer design principles 4 Understand the basis of artefact generation 5 Understand the basis of optimising ultrasound images

	6 Understand how to obtain transthoracic echocardiography images 7 Understand basic assessment of haemodynamic state 8 Understand basic valve assessment using colour flow and two-dimensional imaging 9 Interpret and complete a HEARTscan study 10 Review 20 HEARTscan studies
Assessment:	80% of assessment: one open-book multiple-choice examination consisting of 50 questions. Students will have 1 week to complete the examination during the assessment period at the end of the semester.20% of the assessment: completion of self assessment modules at the end of each tutorial, progressively through the semester. These are completed in the workbooks issued to students and it is a requirement that these workbooks are signed and returned for assessment.
Prescribed Texts:	Royse C, Donnan G, royse A. Pocket Guide to Perioperative and Critical Care Echocardiography. 2006; McGraw-Hills
Recommended Texts:	Other materials will be provided as a package of readings, PowerPoint presentations and case studies.
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:	# Enhance time utilisation # Improve written skills and problem solving skill All students are expected to have access to a computer that can operate a Windows platform or simulation.
Links to further information:	http://www.heartweb.com.au/www/559/1001127/home--default.asp
Notes:	This subject is available to part-time and full-time students. This subject is not available to Commonwealth Supported Students. This subject is not available as breadth. Administration is via e-mail
Related Course(s):	Master of Clinical Ultrasound Postgraduate Certificate in Clinical Ultrasound Postgraduate Diploma in Clinical Ultrasound