

RADI 7015 PRINCIPLES OF VASCULAR SONOGRAPHY 1

Credit Points 10

Legacy Code 401292

Coordinator Donna Oomens ([https://directory.westernsydney.edu.au/search/name/Donna Oomens/](https://directory.westernsydney.edu.au/search/name/Donna%20Oomens/))

Description In Autumn 2024, this subject replaced by RADI 5001 - Physics in Diagnostic Ultrasound. In this subject, students will study two essential areas of knowledge for vascular sonographers: I. cardiovascular anatomy and physiology and II. ultrasound physics. The normal anatomy and physiology of the cardiovascular system, and the key physics principles utilized in ultrasound imaging will comprise the majority of the subject content. This subject provides an essential basis for future study in the Graduate Diploma in Vascular Sonography.

School Medicine

Discipline Radiography

Student Contribution Band HECS Band 2 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Postgraduate Coursework Level 7 subject

Co-requisite(s) RADI 7011 - Practice of Vascular Sonography 1

Restrictions

Students must be enrolled in 4765 Graduate Diploma in Vascular Sonography

Assumed Knowledge

Basic human anatomy, physiology and mathematics.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Examine the normal features of cardiovascular anatomy and its development (CLO 1)
2. Analyse the central principles related to the transmission and interaction of ultrasound with human tissue and how ultrasound images are displayed. (CLO 2)
3. Apply self-directed learning strategies to enhance professional learning in vascular sonography (CLO 5)

Subject Content

- cardiovascular Anatomy and physiology I

1. Features of the cardiovascular system and its development
2. Arterial and venous anatomy of the head, neck and upper limbs
3. Arterial and venous anatomy of the abdomen and lower limbs

- Ultrasound physics I

1. Introduction to ultrasound instrumentation
2. Pulsed Ultrasound
3. Doppler principles
4. Haemodynamics

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are

regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task
Quiz	30 minutes	20	N	Individual
Quiz	60 minutes	30	N	Individual
Final Exam	120 minutes	50	N	Individual

Prescribed Texts

- Gill R. The Physics and Technology of Diagnostic Ultrasound: A Practitioner's Guide. 2nd Ed. Sydney, Australia: High Frequency Publishing; 2020