

# 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 this unit, 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 unit content. This unit 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

**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.

Item	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

## Teaching Periods

### Autumn Campbelltown Composite

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

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