

# RADI 7006 PRINCIPLES OF CARDIAC SONOGRAPHY 1

**Credit Points** 10

**Legacy Code** 401185

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**Description** In Autumn 2024, this subject replaced by RADI 5001 - Physics for Diagnostic Ultrasound. This subject introduces students to two key areas of knowledge for cardiac sonographers: 1) cardiac anatomy and physiology, and 2) ultrasound physics. Students will learn about the normal and abnormal anatomy and physiology of the human heart. They will also learn about the essential physical principles that underpin ultrasound imaging. This subject provides an essential basis for future study in the Graduate Diploma in Cardiac 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/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Postgraduate Coursework Level 7 subject

**Assumed Knowledge**

Applicants for this program must have successfully completed an undergraduate degree in natural and physical sciences or health.

## Learning Outcomes

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

1. Identify and explain normal cardiac anatomical structures and physiological processes
2. Explain the central principles of transmission and interaction of ultrasound with human tissue

## Subject Content

1. Cardiac anatomy and physiology
  - features of The cardiovascular system and its development
  - cardiac Anatomy
  - Cardiopulmonary circulation
  - Essential cardiac electrophysiology
2. Ultrasound physics
  - introduction to Ultrasound instrumentation
  - Pulsed Ultrasound
  - Doppler principles
  - Haemodynamic measurements

## 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 | Mandatory |
|-----------------|---------------------------------|---------|-----------|------------------------|-----------|
| Applied Project | 20 Images with descriptive text | 20      | N         | Individual             | Y         |
| Quiz            | 30 minutes                      | 20      | N         | Individual             | Y         |
| Quiz            | 30 minutes                      | 20      | N         | Individual             | Y         |
| Short Answer    | 90 minutes                      | 40      | N         | Individual             | N         |