

# RADI 6001 PATHOPHYSIOLOGY IN DIAGNOSTIC ULTRASOUND

**Credit Points** 10

**Coordinator** Paul Stoodley ([https://directory.westernsydney.edu.au/search/name/Paul Stoodley/](https://directory.westernsydney.edu.au/search/name/Paul%20Stoodley/))

**Description** This subject will develop a student's understanding of the abnormal anatomical features and pathophysiological processes that underpin frequently encountered diseases within both the Australian Indigenous and non-Indigenous populations in ultrasound practice. Common congenital, genetic and acquired diseases, alongside biofeedback mechanisms controlling homeostasis will be explored. Furthermore, the roles of key pharmacological agents for disease management will be examined.

**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 6 subject

**Pre-requisite(s)** RADI 5001 - Physics for Diagnostic Ultrasound

## Learning Outcomes

After successful completion of this subject, students will be able to:

1. Common Chronic Disease  
General disease  
Congenital, genetic and acquired disease
  1. Assess abnormal anatomical features and pathophysiological processes that underpin frequently encountered diseases in ultrasound practice.
  2. Examine the role of biofeedback mechanisms in homeostasis.
  3. Evaluate common congenital, genetic and acquired diseases
  4. Justify the benefits of key pharmacological agents and their role in disease management.
5. Analyse healthcare outcomes in Australia between indigenous and non-indigenous populations; urban and rural/remote settings.

## Subject Content

Homeostasis  
Hypertension  
Diabetes & obesity  
Pharmacology general

2. Focus Module depending on enrolled program

Module 1. Cardiac Pathophysiology

- Ischaemic Heart Disease
- Cardiomyopathies
- Principles of Heart Valve Disease
- Cardiovascular Pharmacology

Module 2: Vascular Pathophysiology

- Coagulation and clotting pathologies
- Principles of atherosclerotic disease

Module 3: Obstetric and Gynaecological Pathophysiology

- Genetic testing in pregnancy
- Pre-eclampsia in pregnancy
- Factors affecting fertility

## Special Requirements

Essential equipment

Students will need a computer and internet access to use the e-learning platform.

## 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
Quiz	30 minutes	15	N	Individual	N
Report	1,000 words	20	N	Individual	N
Presentation	10 minutes	35	N	Group	N
Final Exam	90 minutes	30	N	Individual	N

Teaching Periods

## Spring (2025)

### Campbelltown

#### On-site

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

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=RADI6001\\_25-SPR\\_CA\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=RADI6001_25-SPR_CA_1#subjects))