

# RADI 7002 PRACTICE OF CARDIAC SONOGRAPHY 1

Credit Points 10

Legacy Code 401189

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

**Description** In this subject, students will learn how to acquire and optimise ultrasound images and to make key measurements. They will learn to draw conclusions about cardiac anatomy and function based on images and measurements and will develop their professional and ethical skills by learning how to plan and implement a cardiac ultrasound scan in a safe and ethical manner. The skills and knowledge learnt in this subject, which includes a work-integrated learning component, provide foundational skills 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

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

**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. Integrate transducer manipulation and machine optimisation to acquire standardised ultrasound images
2. Implement anatomical and physiological measurement techniques to address clinical indications
3. Identify normal and abnormal cardiac ultrasound features to support clinical outcomes
4. Plan examinations and structure workflow to ensure best patient outcomes
5. Apply a legal, ethical and safe work frameworks in professional practice
6. Document clinical experiences and activities to form reflective skills.

## Subject Content

Module 1: Sonographic Practice 1

- I. Anatomical planes and sonographic nomenclature
- II. Ultrasound machine operation

Module 2: Professional & Ethical Practice 1

- I. Planning and implementing an ultrasound examination
- II. Legal and ethical practice
- III. Work health safety & ergonomics

Module 3: Speciality Knowledge & Imaging Skills 1

- I. Cardiac anatomy 1
- II. The cardiovascular system
- III. Electrophysiology 1
- IV. Image acquisition & measurement 1
- V. Image acquisition & measurement 2

VI. Fundamental machine operation 1

VII. Fundamental machine operation 2

## Special Requirements

Legislative pre-requisites

Legislative requirements (such as a criminal record check) are not deemed necessary for students in the course. For students who complete their clinical training in a NSW public hospital, the necessary legislative requirements will be part of their employment conditions. Clinical training for many of the students will be in a private setting, where the necessary requirements (which are likely to differ from public institutions) will be addressed as needed. Training for some students will occur in locations other than NSW (where legislative requirements can be completed if, and when required).

### Special Requirements - NSW Health Legislative Prerequisites Pre-requisites

#### Student Compliance Information for all Health-Related Placements

**Prior to enrolling in this subject, students must have submitted a Student Undertaking Form and undertake to apply for a National Police Check, which is required to be submitted before placement, and a Working with Children Check Student Declaration. Use the link to the Special Requirements webpage below for more information.**

To be eligible to enrol in this subject and complete any required health-related placements or experiences, students must meet Western Sydney University program requirements as well as any special, legislated, or policy-mandated requirements.

### Western Program Requirements

Visit the Special Requirements webpage for details about your program.

Special Requirements ([https://www.westernsydney.edu.au/currentstudents/current\\_students/enrolment/special\\_requirements/](https://www.westernsydney.edu.au/currentstudents/current_students/enrolment/special_requirements/))

### Mandatory NSW Health student placement policy requirements

To be able to undertake placement in any NSW Health facility you must be assessed as compliant with NSW Health student placement policy in the first year of your program, regardless of when you expect to go on your first placement. Access and read the NSW Student Compliance Information Booklet.

NSW Student Compliance Information Booklet ([https://www.westernsydney.edu.au/placements\\_hub/placements\\_hub/student\\_compliance/](https://www.westernsydney.edu.au/placements_hub/placements_hub/student_compliance/))

Please ensure that you

1. Find your existing National Police Check or apply for one
2. Gather documentary evidence of your vaccination history
3. Print and complete all relevant NSW Health forms relevant to the campus you are enrolled at or online enrolment requirements
4. Follow booklet instructions on how to have your compliance documents assessed by NSW health staff.

International students have additional requirements; the link to the booklet will inform you of these requirements.

### School Requirements

Contact your School for further details regarding your School's requirements, if any, such as

- If you live outside of NSW or Australia and need to meet your state, territory or country's compliance requirements

- If you need to meet different state, territory or country compliance requirements.
- NSW Working with Children Check (WWCC) or other state equivalent, valid for your entire program.
- Current approved first aid certificate valid for your entire program  
- approved program providers can be found at the Government Training website
- <http://training.gov.au> (<http://training.gov.au/>)
- Other non-health related requirements.

Student Compliance Resources are also available on the Placements Hub web page (NSW students only)

[https://www.westernsydney.edu.au/learning\\_futures/home/placements\\_hub/placements\\_hub/student\\_compliance](https://www.westernsydney.edu.au/learning_futures/home/placements_hub/placements_hub/student_compliance) ([https://www.westernsydney.edu.au/learning\\_futures/home/placements\\_hub/placements\\_hub/student\\_compliance/](https://www.westernsydney.edu.au/learning_futures/home/placements_hub/placements_hub/student_compliance/))

#### 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
Case Study	2 cardiac sonography cases with questions and answers	25	N	Individual	N
Quiz	90 minutes	25	N	Individual	N
Practical Exam	2 hours	50	Y	Individual	Y
Portfolio	175 scans + Quality & Reflective activities	S/U	Y	Individual	Y

#### Prescribed Texts

- Otto, C 2018. Textbook of Clinical Echocardiography 6th Ed. Saunders USA.

#### Teaching Periods

## Autumn (2025)

### Campbelltown

#### On-site

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

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=RADI7002\\_25-AUT\\_CA\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=RADI7002_25-AUT_CA_1#subjects))