ASAR
Australian Sonographer Accreditation Registry

Australian Sonographer Accreditation Registry Limited
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Appendix 4 – Subject Outline

Name of Subject/Unit	Vascular Sonography
Subject/Unit Code	RADY 5016

(Use a separate template for each subject/unit in the course)

Section 1: General Information

1.1 Core or elective subject/unit Indicate if the subject/unit is a:

[X] core subject/unit

[ ] elective subject/unit

[ ] other (please specify): [ ]

1.2 Subject/unit weighting
If applicable, indicate, the weighting of this subject/unit and the total course points (eg 10 credit points for the subject/unit and 320 credit points for the course).

4.5 **Subject/Unit Credit Points** (eg 10 credit points)

36/54 **Total Course Credit Points** (eg 320 credit points)

1.3 Student workload
Indicate below, the expected student workload per week for this subject/unit:

[ ] Number timetabled hours/week*

12+ Number personal study hours/week**

15+ Number clinical placement hour/week***

27+ Total workload hours/week****

* Total time spent per week at lectures, tutorials, etc
** Total time students are expected to spend per week in studying, completing assignments, etc
*** Total time spent per week on clinical placements
**** That is, * + ** + *** = workload hours.

1.4 Mode of Delivery

Indicate if this subject/unit is delivered (You may tick more than one box).

☐ face to face	☒ online
☐ independent learning module/untimetabled study	☐ by a combination of modes (please specify)
☐ through a practicum	☐ other

Other (please specify) ☐

1.5 Pre-requisites and / or assumed knowledge

Are students required to have undertaken a prerequisite/co-requisite subject/unit(s) for this subject/unit?

☒ Yes ☐ No

If **yes**, provide details of the prerequisite/co-requisite or assumed knowledge requirements below:

Prerequisite:
RADY 5024 Professional Issues for Sonographers
RADY 5030 Ultrasound Physics and Instrumentation
RADY 5013 Abdominal Sonography
RADY5015 Superficial Parts Sonography

Corequisite:
Engaged in ultrasound examinations for minimum 200 hours per study period

1.6 Resource requirements

Do students require access to specialist facilities and/or equipment for this subject/unit (eg specialist facilities, computer access, equipment, particular case / scan types, libraries)?

☒ Yes ☐ No

If **yes**, provide details of the requirements below. Please attach floor plans and photographs or videos showing the facilities and equipment that will be used for the course.

Students need to access the learnonline (moodle) website for this subject. The website provides resource, assessment portals & discussion boards. Students also can access the library and a number of online texts.

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Section 2 – Academic Details

2.1 Student learning outcomes/objectives
List the clinical and academic learning outcomes / objectives students would be expected to attain by successfully completing this subject/unit (link to assessment tasks (refer to 2.4 below)):

a)	Autonomously plan and describe the implementation of a vascular sonographic examination using relevant knowledge of anatomy, physiology, embryology, pathophysiology, haemodynamics, normal and abnormal sonographic appearances, ultrasound physics and image optimisation.
b)	Use independent and expert judgement to select appropriate sonographic examination methods to match the clinical setting and patient requirements in accordance with organisational procedures, professional standards and evidence-based practice.
c)	Use the interpretation of sonographic images and assessment of clinical presentation to modify or extend the vascular sonographic examination across a range of clinical scenarios.
d)	Generate a record of the vascular sonographic examination and the clinical findings and effectively communicate those findings using appropriate terminology to specialist audiences and to the patient.
e)	Review relevant and professional ethical standards in vascular sonography and apply them to deliver consistent, safe and patient focussed services.
f)	
g)	
h)	
i)	
j)	

2.2 Subject/unit content and structure

Provide details in the table below, about the subject/unit content and how it is structured, including practical components such as laboratory, studio and work-based placements. **NOTE**: Please attach course materials where available

At this point in the program, it is expected that much of the student's learning will be self-directed while accruing clinical scanning experience within the Vascular domain. The topics pertaining to this course have been broken down into 5 modules, with each module covering approximately two to three weeks' work over the whole study period. These modules are presented in an order that provides the optimum learning process for this course. The content has been tailored to be as clinically relevant to early career sonographers as possible and the pathologies contained within the notes for each module are those more commonly encountered in Vascular Sonography. Students will complete activities which are interactive, web based simulation programs, which provide step-by-step guides for students for some basic scans. The following lists the content covered: Module 1 – Doppler Physics Review and Ergonomics Module 2 - Embryology, Anatomy & physiology Module 3 - Pathophysiology, & Haemodynamics Module 4 – Arterial Duplex Imaging Module 5 -Venous Duplex Imaging There is a 'practical skills scanning workshop' using models, simulators and phantoms which is held on campus mid-semester. This workshop is an excellent opportunity for students to be given an overview of 'how to scan', what to look for etc, with hands-on simulator training. Although attendance is not compulsory for students, it is highly recommended.

2.3 Teaching methods/strategies

Briefly describe below, the teaching methods/strategies (face to face lectures, online tutorial) used in this subject/unit:

The course is online and modularised, with students advised to attend to each module in a time frame documented on the study calendar. There is a two-week teaching break mid semester along with two revision weeks are provided at the end of each study period. Discussion forums are available online for students to ask their lecturer questions and to engage with their fellow students. Introductory information includes an outline of the course, outline of the assessments and general resources including an electronic copy of the study guide, links to relevant websites and learning activities.

2.4 Student assessment:

Provide, in table format as shown below, a schedule of formal clinical and academic assessment tasks and major examinations for the subject/unit

Assessment Type (eg Assignment – 2000 word essay (specify topic), Examination (specify length))	When Assessed (eg Week 5)	Weighting (eg 10% of Total subject/unit marks)	Learning Outcomes Assessed (link to 2.1 above eg (a), (b))
Assignment Part A -Assessment plan and Doppler Optimisation Part B – Clinical Decision Making Case Study – (Assignment total word count 2000 words)	week 4 week 10	10 20	All
Online Quiz x 4	ongoing	20	a,b,c,d
Online Examination	week 14	50	a,b,c,d

2.5 Prescribed and recommended readings:
Provide below, in formal reference format, a list of the prescribed and recommended readings:

- Pellerito, John & Polak, Joseph 2020, ***Introduction to Vascular Ultrasonography*****,** , 7th edn, Elsevier Health Sciences.
- Thrush A & Hartshorne T,2010, *Vascular Ultrasound: How why and when* 3rd edn, Churchill Livingstone, Edinburgh
- Myers K & Clough AM, 2014 *Practical Vascular Ultrasound; An Illustrated Guide*, CRC Press Florida
- Kim, ESH, Sharma AM, Scissons R, Dawson D, Eberhardt R, Gerhard-Herman, M; Hughes JP; Knight S, Kupinski M, Mahe G, Neumyer M; Poe P; Shugart R; Wennberg P; Wiliams D; Zierler RE; 2020, 'Interpretation of peripheral arterial and venous Doppler waveforms: A consensus statement from the Society for Vascular Medicine and Society for Vascular Ultrasound', *Vascular Medicine (London, England)*, vol. 25, no. 5, pp. 484–506.

2.6 Required Attachments:

Please provide the following materials for each subject:

1. The learning materials for the student
2. The teaching materials
3. The assessment tasks (academic and clinical)
4. Any materials provided to workplace supervisors.