

Appendix 4 – Subject Outline

Name of Subject/Unit Breast Sonography				
Subject/Unit Code RADY 5002				
(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:				
core subject/unit				
elective subject/unit				
X other (please specify): Core for ICBR program / Elective for IMSO program				
1.2 Subject/unit weighting If applicable, indicate, the weighting of this subject/unit and the total course points (eg 10 credit point subject/unit and 320 credit points for the course). 4.5 Subject/Unit Credit Points (eg 10 credit points) 18/54 Total Course Credit Points (eg 320 credit points)	its for the			
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	X 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/o	co-requisite subject/unit(s) for this subject/unit?
If yes, provide details of the prerequisite/co-requisite or as	ssumed knowledge requirements below:
Prerequisites: RADY 5024 Professional Issues for Sonographers RADY 5030 Ultrasound Physics and Instrumentation	
1.6 Resource requirements Do students require access to specialist facilities and/or eq facilities, computer access, equipment, particular case / scalar Yes No	
If yes , provide details of the requirements below. Please at showing the facilities and equipment that will be used for t	
Students need to access the learnonline (moodle) website Students also can access the library and a number of online	



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)	Detail the anatomy, physiology and pathology of the breast with specific reference to ultrasound.			
b)	Relate the role of ultrasound in the diagnosis of breast pathology to other diagnostic tests.			
c)	Demonstrate a comprehensive and advanced knowledge of ultrasound equipment, emerging			
	technologies and the quality management of equipment and diagnostic images.			
d)	Demonstrate a comprehensive and advanced knowledge of breast and axillary scanning techniques.			
e)	Correlate mammographic and breast ultrasound images.			
f)	Discuss the moral and ethical considerations involved in breast ultrasound.			
g)	Relate the role of other imaging modalities such as MRI to breast sonography including emerging			
	sonographic techniques.			
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

The course is online and modularised, with students advised to attend to each module in a time frame documented on the study calendar. The course is structured around 13 study weeks with a two week teaching break mid semester. An introductory virtual classroom is held in the orientation week to explain expectations, learning objectives and course layout. Discussion forums are available online to students to ask questions from the lecturer 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.

The topics pertaining to this course have been broken down into 11 modules, with each module covering approximately one to two weeks' work over the whole study period. These modules are presented in an order that provides the optimum learning process for this course. 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: Breast Embryology, Anatomy & Physiology Book

Module 2: Basic Physics pertaining to Breast Ultrasound Book

Module 3: Sonographic Appearance of Normal Breast Book

Module 4: Scanning technique & Moral, legal and ethical applications Book

Module 5: Overview of Basic Pathological Processes Book

Module 6: Breast Pathologies & their Sonographic appearances Book

Module 7: Lymph nodes, Nipple discharge & Male breast Book

Module 8: Breast Implants Book

Module 9: Interventional procedures Book

Module 10: MRI

Module 11: Current & Future Advances in Breast Imaging Book

2.3 Teaching methods/strategies

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



Study Guide, e-readers, e-books accessed free through the library catalogue, SIMTICS videos (online simulation), quizzes, power-point presentations, exemplar student assignments, web links to external resources such as SONOWORLD and several other external websites and currently relevant journal articles. Students can undertake the course at their own pace. A variety of resources and the assessments are designed to address the objectives. Resources are set out to encourage self-directed learning. This course has no exams. Assessments drive learning for this course, and are devised to scaffold and build on what they already know. The assessments are aligned with AQF requirements and use the Work-Skill Development (WSD) framework.

Main assessment components are

- 1) online quizzes subdivided into 3 parts for testing all of the 11 modules
- 2) Continuing ongoing online discussions spread over the whole study period.

This includes SIMTICS activity, Q&A on common pathologies, bounce back activity which is a reflective peer discussion on developing resilience in workplace and an audio presentation on patient identity check, history taking and patient care factors.

3)Interesting case scenario covering relevant history, procedure, patho-physiology, sonographic features and possible follow-up of additional tests to arrive at a diagnosis

Students must pass each assessment component satisfactorily in order to obtain a pass for this course. Students will be required to pass practical assessments and will be required to keep a log book to record the number and quality of breast ultrasound examinations which have been performed. This should be signed by their supervising sonographer/radiologist. Number of satisfactory examinations required for log book to pass:

10 x full breast scans (both sides) 50 x targeted scans 5 x prosthesis scans 10 x interventional studies

These practical examinations should be completed within 6 months of completion of the theoretical portion of the course. A practical assessment proforma specifically designed for breast ultrasound studies will be circulated to all students and supervising sonographers/radiologists so they are aware of the minimum standard required for an examination to be assessed as being satisfactory.



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	Week 8	30	all
Quiz	Week 5, 10, 14	25	all
Online tutorial discussion	Ongoing	45	all
Practical Assessment (Log book)		P/F	b,c,d,e



2.5 Prescribed and recommended readings:

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

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Breast Ultrasound, Stavros, A Thomas e-book

Additional suggested references:

Breast Imaging - The Requisites Ikeda 2010

Rumack: Diagnostic Ultrasound, 4th Edition, e-book 2011

Diagnostic Ultrasound: Physics and Equipment Hoskins Martin Thrush 2010

Breast Imaging Kopans 2007 e-book

Breast Imaging Review A Quick Guide to Essential Diagnoses, 2nd edn, Springer International: Shah, BA, Fundaro, GM & Mandava, SR 2014

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.