

Overview of the task:

Part A: Assessment plan Doppler Optimisation ***(In a vascular setting)***

Due 26th March at 11.00pm

Course weighting 10%

There **are 2 aspects** to this task:

1. Watch ALL the physics videos in **Module 1**, AND complete **ALL OF the associated quizzes**.
 - 4 quizzes are embedded in the videos.
 - Watch the video do the quiz – quick and easy.
2. You will create and upload a **3–5-minute presentation** demonstrating your knowledge of Doppler and ***image optimisation*** in a vascular setting.
 - The purpose of this assignment is to cement your skills and understanding of a Doppler when scanning.

(Total Word count – APPROX 500 words)

Part B: CASE STUDY-

Due 28th May at 11.00pm

Course weighting 20%

There are **2 aspects** to this task:

1. Students are to ***upload case study presentations***
 - This assignment will be a presentation – this time up to 10 slides:
 - ***You must use Scholarly references. As this is a post graduate course papers will be marked down or failed if this is not done correctly.***

It is Important that you comply with the following

- Students must include at **least 2 self-acquired vascular images** in their case study – AND THEY MUST INCLUDE A DOPPLER MODE.
 - If you are using a patient image you must have a ***supervisor signoff*** for images from your workplace
 - You ***MUST refer*** to this image in your assignment AND reference it correctly.
2. Your script- ***Written script fully referenced.***
 - Details of what needs to be covered can be found below

(Total Word Count – 1500 words)

Important tasks:

Before you begin: **Remember you are in a post graduate course**, so the bar is elevated for your assignment submissions. Take the time to do this correctly the first time. There are several links available to you, they are easy to follow.

Academic Integrity – Academic misconduct occurs when staff or students disregard the values of academic integrity.

- You should review the following link to ensure you understand responsibilities relating to academic integrity (note Rubric requirements) [Academic Integrity Module](#)
- **You will be directed to this link if questions arise on the discussion board – so please go here first**

Referencing –

- You will be using APA 7 referencing for these tasks – [please use this link](#)
- Assistance with referencing can be found via the following link <https://lo.unisa.edu.au/course/view.php?id=3839§ionid=555770>
- Remember: if you use an automatic reference process, **YOU must check** your references prior to submission.
- Failure to reference as per instructions will be a FAIL overall

Formatting:

- For **Part A** – use your imagination – don't over crowd your slides, you need to highlight the important points.
- **Part B**
 - Times New Roman font, 1.5 spacing, 12-size font, 2.5cm margins all round- please submit your assignment in WORD format.
- Total Word Count for PART A + PART B is APPROXIMATELY 2000 words (guides for Part A and B are available below) - word count will include intext referencing but NOT reference lists

Rubric:

- Assignments will be marked according to the rubric below. The percentage weightings of each component of the assignment can also be found here. In keeping with all the courses in the postgraduate diploma of medical sonography, you will not be given a marks breakdown, but rather a HD, D, C, P1, P2 or F grade.

Patient Confidentiality –

- If you are using images from your practice, **you MUST include a signed statement from your supervisor** that you have followed your workplace protocols with respect to **patient confidentiality** and permission procedures. All images must be de-identified.

Group Allocation

- Student group allocation can be found in Quiz and Assignment Submission Pages –

Part A – Doppler Optimisation in Vascular Setting

Understanding Doppler is as an essential tool in sonography is fundamental to your success as a medical sonographer – This first task you will demonstrate your understanding of Doppler optimisation -make sure you follow the required tasks to maximise your potential grade for this task

1. **Have you completed watching the Doppler videos and embedded quizzes on the learnonline pages?**
2. **Now let's look at the next aspect of this task – the 3-5 Minute Presentation what do I do?**

3-5 Minute Presentation what do I do?

In the assessment folder there a series of scenarios with an ultrasound image attached. You will be allocated to a scenario.

You are to copy the image associated with that scenario into a PowerPoint presentation and create your presentation utilising that image.

Your task then is to respond to the following as part of this presentation.

1. Given the scenario, **what is the most likely anatomy you will be assessing and why?**
2. Given the anatomy and the image
 - a. What style of **probe** is being used - is this the best choice for this examination and **why?**
 - b. What is the most appropriate **system pre-set** that will be utilised for this study and why?
3. Consider the image
 - a. Could this image be **optimised?** If so how, if no what makes this image a good image?
 - b. Indicate if you can see any **image artefacts** and the benefit OR issue with that

The next task requires you to do 1 of 2 things, make sure you tell the reader what path you have taken.

4. Either of the following
 - a. Acquire your **own image** – make sure you use Colour +/- spectral Doppler **and explain how you have optimised** the image – (if you have had difficulty optimising this image, explain why)

OR

 - b. Find an image from an academic source and explain how this might be better optimised.
 - i. Make sure this image is referenced
 - ii. If you take an image from a journal article, you must also include an additional slide with a fully optimised self-acquired image of another bit of anatomy (this is for students who ARE NOT scanning in a vascular setting only)
5. Your final slide must include information relating to **Power Doppler** – you are to provide a brief **overview of Power Doppler** (including a benefit you would see in a vascular environment)

Don't forget to reference!

Vascular Sonography Assignment – SP2 2023

Rubric – Doppler Optimisation

Doppler and image optimisation Part A	FAIL	MEETS STANDARDS
		PASS
Module 1 Physics video and quizzes Weighting - 10%	Not view	VIEWED
Presentation/Graphics Weighting - 15%	- No effort has been made on slide appearance. - No graphics or effects incorporated. - Limited information presented.	-Slides are attractive . -Text is easy to read . -Graphics and effects are used throughout to enhance the presentation.
Content Weighting 55%	• Slides do not contain relevant information. • -Limited information provided. • Limited or no evidence of an understanding of the Doppler modes or plan for assignment. • Approach to the presentation is unclear • A large amount of relevant information is missing • Limited or no research • Presentation is longer than 5 minutes	• All required slides are included with correct information. • All relevant concepts have been identified. • Topics are discussed clearly and in an organised manner. • Consistent evidence of comprehensive understanding of ultrasound terminology if applicable. • Displays evidence of exceptional understanding of the course material and key concepts.
Grammar and Mechanics Weighting - 10%	• Presentation does not work or has not been compiled correctly. • No voice recording included on slides. • Multiple typographic, grammatical and punctuation errors throughout presentation.	• There are no mechanical errors throughout the presentation. • Voice recording included on all slides. • There are no typographic, grammatical and punctuation errors throughout presentation.
Academic Integrity Weighting 10% Note: if the student fails this category, then the overall mark will be a F.	• No evidence of citation of literature. (or limited and incomplete) • Literature if cited is limited in number and incomplete. • No evidence of paraphrasing. • Inconsistent referencing.	• Literature cited and complete with a variety of relevant, unique peer reviewed and scholarly resources. • Appropriate referencing style as advised. • Sources are integrated exceptionally well in the content to cover a comprehensive and succinct analysis of key concepts.

PART B - Case Study – Major work

Before you commence this part of your paper – read through the assignment tasks and marking rubric.

You are creating a **case study presentation and script** – you must load BOTH into the portal. Marking will be completed relative to the presentation ONLY, and should the marker need to assess further, they will use your script. If you DO NOT submit a script, a deduction of 25% overall marks will be applied to your grade.

*You will be **allocated a pathology** that relates to vascular ultrasound– your case study must be **developed around** that pathology – you can select the most appropriate style of patient presentation. You are to develop a presentation from 6-8 minutes.*

You will introduce your pathology + patient and clinical scenario:

You are to consider your major works under 3 major headings, the tasks provide will fall into each of these.

- *Pre-Encounter*
- *Encounter*
- *Post encounter*

Don't forget:

- **Formatting**
 - Slide – make this engaging and easy to follow
 - Times New Roman font, 1.5 spacing, 12-size font, 2.5cm margins all round- please submit your assignment in WORD format.
- **Referencing**
 - Failure to do this appropriately will be an **overall FAIL**
- **Self-acquired image and worksheets**
 - Must be anonymous with NO reference to your place of work.
 - If you cannot find a patient with this pathology, then you need to think about how you will present a self-acquired image. (Images DO not need to be added to your script)

1. Overview of your case study: The Pre encounter

300 words

Present your case study to the reader: who what how and why is your patient presenting to your department. Your response should incorporate the following:

- a. Details of the ultrasound request form – the type of study being requested.*
- b. What would the protocol be for this type of study where does this standard of practice come from?*
- c. Are there any clinical indicators/ clinical history from your patient that may alert you to pathology or areas of concern?*
- d. Based on this information, what is your expected provisional diagnosis*

2. Pathology

400 words

- a. Provide an overview of the pathological process that may lead to the pathology you have been allocated*
 - *Include aetiology and other relevant information to this pathology (is it genetic or acquired for example)*
- b. Based on this pathology, what sonographic or protocol changes could occur to assist with presenting this pathology.*

3. Sonographic appearances and examination: The encounter

500 words

You are to consider both the examination and patient when responding to the tasks provided.

- a. You are to select a series of images that BEST reflect your findings of this case study – these images should be presented in a logical process to demonstrate to the reader how you have captured relevant information in this case study- You are to use appropriate sonographic language and measurements where relevant when presenting your findings*
- b. You should indicate if relevant any modifications to protocol and scanning techniques might take place with patients presenting with this pathology?*
- c. You should include a worksheet, that is legible and clearly demonstrates your findings- if you do not have worksheets in your department, you are to create a worksheet to demonstrate your findings to the reader*
- d. You are to include a provisional diagnosis of your findings and any recommendations for additional imaging or follow up*

4. A reflection based- The post encounter review

300 words

Consider the case scenario you have chosen and the research you have conducted – your reflection may incorporate some of the following or be something completely independent – there is NO right or wrong answer, but you need to demonstrate you have considered your responses.

- a. Did you discover any major gaps in your knowledge in this area of clinical sonography?
- b. Are there aspects of the clinical examination that you need to think about in more detail to ensure you have a good diagnostic examination for the referring clinician?
- c. Would a discussion with your patient and obtaining a clinical history assist with this examination?
- d. Are there any complimentary tests, other imaging or advanced ultrasound techniques that might assist with your patients' clinical picture?

Be sure to check the weighting in the marking rubric for all sections- and indications of word count.

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RUBRIC – Case Study: each section provides details of the weighting for each question. Use this rubric as a guide.

Sonographer trainees research independently Case Study	FAIL	MEETS STANDARDS			
Script + Power Point	Missing script OR PP Deduct 25% from overall grade	Yes			
PowerPoint presentation style Quality of writing using correct grammar, spelling, punctuation, syntax and terminology and formatting 15%	No effort has been made on slide appearance. No graphics or effects incorporated. Limited information presented. - There are several typographic, grammatical and punctuation errors. - Formatting does not conform to requirements	- Slides are attractive. - Text is easy to read. - Graphics and effects are used throughout to enhance the presentation. - Writing is free of typographic, grammatical and punctuation errors. - Writing style is coherent, very easy to follow and flows well. - Formatting conforms to requirements.			
Academic Integrity <i>This assessment will be heavily weighted to Part B of the assignment pages. Students are encouraged to use Part A to comprehend referencing styles.</i> Weighting 5% <i>Note: if the student fails this section + any of THE 2 proceeding categories, the final grade will be a fail – no marking will be included.</i>	No evidence or little evidence of citation of literature. - Literature if cited is limited in number and incomplete. - No evidence of paraphrasing. - Inconsistent referencing. No self-acquired images – OR self-acquired images do not reflect vascular examination.	- Literature cited and complete with a variety of relevant, unique peer reviewed and scholarly resources. - Appropriate referencing style as advised. - Consistent paraphrasing of data and ideas seen. Sources are integrated exceptionally well in the content to cover a comprehensive and succinct analysis of key concepts. Includes self-acquired image.			
		Pass	Credit	Distinction	High Distinction
1: Pre encounter Overview of case study Sonographer trainee evaluates and reflects upon the information obtained to provide an overview including how what and why: i. Information relating to the request form ii. Understanding of the origins of the protocol . iii. Clinical presentations and clinical history of patient iv. Sonographer trainee analyses and synthesises the sonographic information to interpret the findings coupled with the clinical history and arrives at a provisional diagnosis with possible differential diagnoses offered. <i>(300 WORDS)</i> Weighting 15%	Limited or no evidence to demonstrate understanding of pre-encounter, and theory underpinning the clinical scanning technique.	- Evidence of satisfactory Provides rationale for chosen approach.	Consistent evidence of satisfactory Reasonable insight into current organisational protocols and professional standards to deliver safe, patient focussed services. - Able to clearly articulate identifying, creating, and developing arguments, perspectives including provisional diagnosis	Consistent evidence of comprehensive understanding of the pre-encounter, and theory underpinning the clinical scanning technique. - is articulated well Reasonable insight into current organisational protocols and professional standards to deliver safe, patient focussed services.	Consistent evidence of exceptional understanding of the pre-encounter, and theory underpinning the clinical scanning technique. - Provides an appropriate and relevant approach - Rationale is articulated exceptionally well. Substantial insight into current organisational protocols and professional standards and evidence-based practice to deliver safe, patient focussed services.
2: Pathology Sonographer trainee finds/generates data needed to learn the following: i. Recognise pathology and understand the causative mechanism. ii. Aetiology and other relevant information iii. Patient presentation and clinical examination. iv. Display an understanding of modifications to protocol when faced with a given pathology. <i>(up to 400 words)</i>	Little to no understand the pathology or its aetiology. Little or no evidence research into modifications or presentations	Consistent evidence of an understanding of pathology and aetiology. Consistent evidence of knowledge of patient presentation or modifications to deliver safe, patient focussed services.	Reasonable evidence of an understanding of pathology and aetiology. Reasonable insight patient presentation or modifications to deliver safe, patient focussed services.	Clear and focussed evidence of an understanding of pathology and aetiology. Reasonable insight into patient presentation or modifications to deliver safe, patient focussed services. - Able to clearly articulate identifying, creating and developing arguments, perspectives and critical evaluation of the problem well	Exceptional evidence of an understanding of pathology and aetiology. Exceptional evidence of synthesis of findings to protocol adaptation and presentation of findings. Substantial insight patient presentation or modifications to deliver safe, patient focused services. - Able to clearly articulate identifying, creating, and developing arguments, and complex perspectives exceptionally well. Explicit articulation of barriers, challenges, and pitfalls in different patient

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<i>Weighting 25 %</i>					presentations along with potential solutions
3: Encounter and sonographic appearances and examination Sonographer trainee evaluates and analyses <i>i. the ultrasound findings</i> in an organised manner. <i>ii. Presents</i> information incorporating appropriate language and associated sonographic appearances <i>iii. Includes worksheet and sonographer report legibly providing diagnosis based on evidence</i> <i>iv. Provisional diagnosis supported by ultrasound findings</i> (Up to 500 words) Weighting 30%	• Little or no evidence of an understanding ultrasound language or how to present findings clearly • Little or no evidence demonstrating provisional diagnosis.	• Consistent evidence of an understanding ultrasound language or how to present findings clearly - • Consistent evidence of synthesis of findings to protocol adaptation and presentation or findings. • Consistent evidence of understanding task and therefore demonstrating provisional diagnosis.	• Little or no evidence of an understanding ultrasound language or how to present findings clearly • Little evidence of synthesis of findings to protocol adaptation and presentation or findings. • Little or no evidence demonstrating provisional diagnosis.	• Clear and focussed evidence of an understanding ultrasound language or how to present findings clearly • Clear and focussed evidence of synthesis of findings to protocol adaptation and presentation or findings. • Clear and focussed evidence demonstrating link between clinical findings and provisional diagnosis. • Able to clearly articulate identifying, creating and developing arguments, perspectives and critical evaluation of the problem well	• Exceptional evidence of an understanding ultrasound language or how to present findings clearly • Exceptional evidence of synthesis of findings to protocol adaptation and presentation or findings. • Exceptional evidence demonstrating the links between clinical, physical findings and a provisional diagnosis. • Explicit articulation of barriers, challenges and pitfalls in different patient presentations along with potential solutions
4: Post encounter and Reflection Sonographer trainee analyses and synthesises the sonographic information to interpret the findings coupled with the clinical history. Sonographer trainee understands the importance of clinical history to diagnosis and patient care and demonstrates the ability to elicit relevant clinical history. Sonographer trainee evaluates and reflects upon the information obtained to <i>Weighting 10%</i> (up to 300 words)	• Insufficient or no evidence of questions required to elicit information. • The response contains some ideas and content but with little or no evidence of knowledge synthesis and integration across sources. •	• Adequate interpretive and analytical ability with synthesis of knowledge across sources. • Questioning mostly has purpose based on literature and an understanding of the underlying disease protocol. • Questioning is broadly based, and superficially covered.	• Good interpretive and analytical ability with synthesis of knowledge across sources. • Questioning has clear purpose based on literature and an understanding of the underlying disease protocol.	• Clear evidence of questions required to elicit relevant information. • Demonstrates a high level of interpretive and analytical ability with synthesis of knowledge across sources. • Questioning has clear, well-defined purpose based on literature and a clear understanding of the underlying disease protocol.	• Clear evidence of questions required to elicit relevant information. • Demonstrates and extremely high level of interpretive and analytical ability with synthesis of knowledge across sources. • Questioning demonstrates an extremely high level of well-defined purpose based on literature and a clear understanding of the underlying disease protocol. • Shows substantial insight in identifying key issues required for diagnosis.