

**Certificate in Clinician Performed Ultrasound
(CCPU)
Syllabus**

Rheumatology

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Rheumatology Syllabus

Purpose

This unit is designed to cover the theoretical and practical curriculum for Rheumatologic ultrasound.

Prerequisites

Learners should have completed the Applied Physics in Ultrasound unit.

Course Objectives

On completing this course learners should be able to demonstrate:

- A detailed understanding of the gross anatomical structure and surface anatomy of the relevant organ systems and the anatomical relationship to surrounding organs and structures.
- An understanding of an approved protocol for ultrasound examination
- Effective performance and interpretation of Rheumatologic ultrasound including:
- Image optimization
- Providing accurate measurements when necessary
- Describing the diagnostic criteria for the conditions/pathologies listed in the syllabus
- The origin of the artefacts which commonly occur in this examination;
- An understanding of the limitations of Rheumatologic ultrasound

Course Content

The course will present learners with the following material:

- Anatomy
- Gross anatomy
- Relational anatomy between adjacent organs and structures
- Pathology
- Musculoskeletal ultrasound physics
- Clinical application/relevance
- Indications including ultrasound guided injections
- Musculoskeletal ultrasound equipment
- Machine function/operation

Techniques, Physical Principles and Safety:

- Appropriate transducers
- Artefacts
- Windows
- Standard images

- Image optimisation in the context of a rheumatologic scan

Imaging Skills:

- Patient/probe position
- Planes and system of examination
- Image optimisation
- Dynamic assessment
- Colour Doppler
- Power Doppler

Specific Anatomy and Pathology:

A) Hand and Wrist	B) Elbow
Synovial thickening	Synovial thickening
Synovial fluid/effusion	Synovial fluid/effusion
Bone erosion	Bone erosion
Tenosynovitis	Tenosynovitis
Tendinopathy	Tendinopathy
Tendon nodule	Tendon nodule
Tendon rupture	Tendon rupture
Ganglion	Medial epicondylitis
Ultrasound guided aspiration /injection	Lateral epicondylitis
Enthesitis	Olecranon bursitis
Calcified cartilage	Ultrasound guided aspiration
Carpal tunnel syndrome	Ultrasound guided injection
Monitoring disease activity	Enthesitis
Monitoring disease progression	Calcified cartilage
Ligament tear	Monitoring disease activity
	Monitoring disease progression
C) Shoulder	D) Hip
Synovial thickening	Synovial thickening
Synovial fluid/effusion	Synovial fluid/effusion
Bone erosion	Bursitis
Complete rotator cuff tear	Ultrasound guided aspiration
Calcific tendonitis	Ultrasound guided injection
Bicipital tendonitis	Bone erosion
Ruptured biceps tendon	Calcified cartilage
Subacromial bursitis	Monitoring disease activity
Ultrasound guided aspiration	
Ultrasound guided injection	

Tendinopathy	
Dislocated biceps tendon	
Enthesitis	
Calcified cartilage	
Partial rotator cuff tear	
Subacromial impingement	
Spinoglenoid and suprascapular notch ganglions	
Monitoring disease activity	
Monitoring disease progression	
Ligament tear	
E) Knee	F) Ankle and Posterior Foot
Synovial thickening	Synovial thickening
Synovial fluid/effusion	Synovial fluid/effusion
Bone erosion	Tenosynovitis
Quadriceps tendon rupture	Tendinopathy
Patellar tendonitis	Tendon rupture
Patellar tendinopathy	Achilles tendinopathy
Patellar tendon rupture	Achilles tendon rupture
Bursitis	Bursitis
Popliteal cyst	Ultrasound guided aspiration
Ultrasound guided aspiration	Ultrasound guided injection
Ultrasound guided injection	Bone erosion
Enthesitis	Enthesitis
Meniscal cyst	Plantar fasciitis
Collateral ligament tear	Calcified cartilage
Calcified cartilage	Paratendonitis
Quadriceps tendonitis	Plantar fascia rupture
Quadriceps tendinopathy	Ankle ligament enthesopathy
Meniscal tear	Monitoring disease activity
Monitoring disease activity	Monitoring disease progression
Monitoring disease progression	Ankle ligament tear
Collateral ligament enthesopathy	
Ligament tear	
Other ligament pathology	
G) Forefoot	
Synovial thickening	
Synovial fluid/effusion	
Bone erosion	
Tenosynovitis	
Ganglion	

Ultrasound guided injection	
Tendinopathy	
Tendon nodule	
Tendon rupture	
Ultrasound guided aspiration	
Enthesitis	
Calcified cartilage	
Intermetatarsal bursitis	
Morton's neuroma	
Monitoring disease activity	
Monitoring disease progression	
Ligament tear	

Training

- Recognised through attendance at an ASUM accredited Rheumatology course. (Please see the website for accredited providers)
- Evidence of the satisfactory completion of training course is required for unit award.

Teaching Methodologies

All courses accredited toward the CCPU will be conducted in the following manner:

- A pre-test shall be conducted at the commencement of the course which focuses learners on the main learning points
- Each course shall comprise at least six (6) hours of teaching time of which at least three (3) hours shall be practical teaching. Stated times do not include the physics, artefacts and basic image optimization which should be provided if delegates are new to ultrasound
- Learners will receive reference material covering the course curriculum.
- The lectures presented should cover substantially the same material as the ones printed in this curriculum document.
- An appropriately qualified clinician will be involved in both the development and the teaching of the course and will be present for at least part of the course itself.
- The live scanning sessions for this unit shall include sufficient live patient models to ensure that each candidate has the opportunity to scan. Models will include normal subjects and patients with appropriate pathologies. If the latter are unavailable, there will be at least one image interpretation station with cineloops demonstrating the appropriate pathology.
- A post-test will be conducted at the end of the course as formative assessment.

Assessments

- Two (2) formative assessments of clinical skills, specifically related to the assessment of rheumatologic ultrasound
- One (1) summative assessment of clinical skills, specifically related to the assessment of rheumatologic ultrasound

All assessments are to be performed under the supervision of the Primary Clinical Supervisor using the competence assessment form supplied at the end of this document.

Logbook Requirements

- 225 supervised rheumatology scans, including:
 - Fifty (50) shoulder
 - Thirty (30) hand/wrist
 - Twenty (20) hips
 - Twenty (20) knees
 - Twenty (20) elbow
 - Sixty (60) foot/ankle
 - Twenty-five (25) guided injections
 - At least five (5) positives for shoulder and foot/ankle
 - At least three (3) positives for hand/wrist, hips, knees and elbow
- All scans must be clinically indicated
- All cases must be compared with gold standard findings (such as comprehensive imaging, pathological findings or if these are unavailable then clinical course)
- All logbook cases must be signed off by a suitably qualified supervisor (see section 6 of the CCPU Regulations)
- At the discretion of the ASUM CCPU Certification Board candidates may be allowed an alternative mechanism to meet this practical requirement
- Those cases that involve a procedural component must be signed off by a suitable assessor who performs those procedures themselves.

Please note: All assessments and logbooks are required to be completed by the Primary Clinical supervisor as outlined in the CCPU regulations.

ASUM CCPU Competence Assessment Form

Rheumatology

Candidate: _____

Assessor: _____

Date: _____

Assessment type: Formative (feedback & teaching given during assessment for education) ☐
 Summative (prompting allowed but teaching not given during assessment) ☐

To pass the summative assessment, the candidate must pass all components listed

Prepare patient

	Competent	Prompted	Fail
Position			
Informed			

Prepare Environment

Lights dimmed if possible			
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Probe & Preset Selection

Can change transducer			
Selects appropriate transducer			
Selects appropriate preset			

Data Entry

Enter patient details			
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Image Acquisition

Optimisation (depth, freq, focus, gain)			
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Demonstrates appropriate Images

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Demonstrates appropriate images of common abnormalities

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Artefacts

Identifies & explains the basis of common artefacts			
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Record Keeping

Labels & stores appropriate images			
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Documents any pathology identified

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Completes report:

Each view adequate / inadequate

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Documents focussed scan only

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Describe findings briefly

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Integrates ultrasound findings with clinical assessment and explains how the findings might change management

--	--	--

Machine Maintenance

Cleans / disinfects ultrasound probe

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Stores machine and probes safely and correctly

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For Formative Assessment Only:

Feedback of particularly good areas: _____

Agreed actions for development _____

Examiner Signature: _____ Candidate Signature: _____

Examiner Name: _____ Candidate Name: _____

Date: _____