

# HLT322 Clinical Reasoning in Prosthetics & Orthotics

**School:** School of Health - Public Health

2023 | Session 2

UniSC Sunshine Coast

**BLENDED  
LEARNING**

Most of your course is on campus but you may be able to do some components of this course online.

Please go to [usc.edu.au](http://usc.edu.au) for up to date information on the teaching sessions and campuses where this course is usually offered.

## 1. What is this course about?

### 1.1. Description

Using previous knowledge and psychomotor skills learnt regarding prosthetic and orthotic treatment, this course will teach you to reason through specific case study and simulated model experiences. In this course, you will learn how to approach the clinical assessment of an individual in a systematic manner and interpret the data assessed to create holistic evidence-based treatment plans, both for an individual and across various communities to improve access and care.

### 1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
<b>BLENDED LEARNING</b>			
<b>Learning materials</b> – Independent structured learning materials	5hrs	Week 1	8 times
<b>Tutorial/Workshop 1</b> – Tutorial/workshop	3hrs	Week 1	8 times
<b>Laboratory 1</b> – Laboratory	4hrs	Week 1	8 times

### 1.3. Course Topics

Module 1: Clinical reasoning frameworks and application in a clinical setting

Module 2: Using reasoning in varied clinical pathologies (Motor neurone conditions, vascular disease, post-acute prosthetic management)

Module 3: Application of clinical prescription and justification skills

## 2. What level is this course?

300 Level (Graduate)

Demonstrating coherence and breadth or depth of knowledge and skills. Independent application of knowledge and skills in unfamiliar contexts. Meeting professional requirements and AQF descriptors for the degree. May require pre-requisites where discipline specific introductory or developing knowledge or skills is necessary. Normally undertaken in the third or fourth full-time study year of an undergraduate program.

## 3. What is the unit value of this course?

12 units

#### 4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES	GRADUATE QUALITIES MAPPING	PROFESSIONAL STANDARD MAPPING *
On successful completion of this course, you should be able to...	Completing these tasks successfully will contribute to you becoming...	The Australian Orthotic Prosthetic Association
1 Critically evaluate the validity and importance of client information and outcomes to improve clinical decision making.	Creative and critical thinker	1.1.2, 1.1.5, 1.1.6, 2.1.1, 2.2.1, 2.3.2, 2.3.3, 2.3.5, 2.3.8, 2.5.2, 6.2.1, 6.2.2, 6.2.3
2 Propose and justify an evidence-based prosthetic and/or orthotic care plan that addresses client-centred goals	Creative and critical thinker	1.1.2, 1.3.1, 1.3.2, 2.1.1, 2.2.1, 2.3.2, 2.3.6, 2.3.7, 2.3.8, 2.4.3, 2.4.4, 2.5.1, 2.5.2, 4.2.3, 5.2.1, 5.2.2, 6.2.1, 6.2.2, 6.2.3
3 Demonstrate professional (effective and safe) assessment, critical thinking and psychomotor skills in simulated clinical settings	Empowered	1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.5, 1.1.6, 1.1.7, 1.1.8, 2.1.1, 2.1.2, 2.1.3, 2.4.1, 2.4.2, 2.4.4, 3.1.1, 4.1.1, 5.2.1, 5.2.3, 5.2.4, 5.3.1, 5.3.2, 6.2.5
4 Communicate effectively using oral and/or written forms with the intended audience (client, peer, external bodies) to facilitate informed decision making.	Empowered	1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.5, 1.1.6, 1.1.7, 1.1.8, 1.3.1, 1.3.2, 2.3.1, 2.3.3, 2.3.4, 2.3.7, 2.4.6, 4.2.2, 6.1.2, 6.1.4
5 Plan and perform the manufacture and/or modification of an orthosis/prosthesis to comply with profession standards in the technical quality and clinical functionality of finished device.	Creative and critical thinker	2.4.1, 2.4.2, 2.4.3, 2.4.4, 2.4.5, 3.1.2, 3.1.3, 3.2.1, 3.2.2, 4.1.1, 4.1.2, 4.1.3, 5.1.1, 5.1.2, 6.2.5

#### \* Competencies by Professional Body

CODE	COMPETENCY
THE AUSTRALIAN ORTHOTIC PROSTHETIC ASSOCIATION	
1.1.2	Ensures the client is the focus of the care pathway
1.1.5	Listens effectively to the client and/or carer
1.1.6	Encourages the client and/or carer to participate and provide feedback
1.3.1	Provides clinical justification for prescribed orthotic/prosthetic client treatment
1.3.2	Provides relevant information in order to facilitate client access to care
1.1.1	Ensures all interactions with the client and/or carer demonstrate respect, honesty, empathy and dignity and are conducted in a culturally appropriate manner
1.1.3	Ensures the client and/or carer is aware of their rights and responsibilities
1.1.4	Obtains informed consent from the client and/or carer prior to the provision of care
1.1.7	Provides prompt, accurate and comprehensive information in clear terms to enable the client and/or carer to make an informed decision
1.1.8	Uses all available resources to enhance communication
2.1.1	Identifies subjective and objective information to enable development of an appropriate orthotic/prosthetic care plan
2.2.1	Accesses and utilises evidence to guide clinical decisions
2.3.2	Considers the information obtained, the client and/or carer's goals and evidence when formulating treatment options
2.3.3	Discusses treatment options with the client and/or carer to support client centred care and informed choice
2.3.5	Identifies clients who require collaborative care and liaises with the health professional team to ensure integrates care planning

CODE	COMPETENCY
2.3.8	Selects appropriate outcome measures
2.5.2	Maintains legible, concise and accurate documentation using contemporary methods
2.3.6	Determines and justifies the design details of the orthosis/prosthesis prescription
2.3.7	Includes client, carer and/or health professional team education and follow-up when planning treatment
2.4.3	Reviews the client at appropriate intervals to evaluate fit, function, quality and safety of the orthosis/prosthesis
2.4.4	Evaluates and monitors treatment outcomes using patient feedback and/or outcome measures
2.5.1	Adheres to legislative and organisational requirements for all documentation
2.1.2	Selects assessment techniques, outcome measures and other tools/instruments based on evidence, which are relevant to the client's presentation
2.1.3	Performs assessment professionally, safely and effectively
2.4.1	Considers all relevant characteristics of the client during orthosis/prosthesis fitting and review processes
2.4.2	Uses appropriate techniques to ensure optimal fit and function of the orthosis/prosthesis
2.3.1	Facilitates client and/or carer to establish personal goals
2.3.4	Discusses short and long term treatment goals with the client and/or carer
2.4.6	Discusses progress toward goals with the client and/or carer
2.4.5	Modifies treatment to ensure best possible outcomes are maintained
3.1.1	Utilises appropriate casting, measuring and/or cast modification techniques to facilitate fabrication
3.1.2	Fabricates and/or coordinates the optimal fabrication of orthoses/prostheses
3.1.3	Performs and/or coordinates requires modifications of orthoses/prostheses
3.2.1	Assesses the orthosis/prosthesis for structural safety at appropriate intervals
3.2.2	Ensures the orthosis/prosthesis is compliant with manufacturer guidelines and standards
4.2.3	Prescribes and designs orthosis/prosthesis to achieve optimal outcomes within the approved budget for client treatment
4.1.1	Facilitates appropriate completion of treatment
4.2.2	Prepares and/or coordinates submission of client funding documentation as required
4.1.2	Demonstrates an ability to triage individual client case load within broader facility requirements for client care
4.1.3	Facilitates appropriate completion of all supportive activities
5.2.1	Recognises the responsibility to do no harm
5.2.2	Complies with relevant laws, regulations, policies and guidelines
5.2.3	Abides by applicable codes of ethics and conduct
5.2.4	Recognises and responds appropriately if client is at risk
5.3.1	Works within professional scope of practice, consent of client and/or carer and authority of employer
5.3.2	Seeks assistance or refers on when beyond own level of competence
5.1.1	Adheres to legislation and workplace guidelines relating to safety
5.1.2	Identifies workplace hazards and acts to eliminate or reduce risks
6.2.1	Assesses and critically analyses sources of evidence
6.2.2	Demonstrates a systematic approach to analysis and decision making

CODE	COMPETENCY
6.2.3	Integrates evidence and new learning into practice to improve health outcomes for clients
6.2.5	Critically and continuously evaluates practice
6.1.2	Shares skills and knowledge with health professional colleagues and students
6.1.4	Seeks out leaders within the profession for advice and mentoring

## 5. Am I eligible to enrol in this course?

Refer to the [UniSC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

### 5.1. Pre-requisites

HLT321 and enrolled in Program SC367 with a Prosthetics & Orthotics Extended Major

### 5.2. Co-requisites

Not applicable

### 5.3. Anti-requisites

Not applicable

### 5.4. Specific assumed prior knowledge and skills (where applicable)

Basic technical and clinical skills related to Prosthetics & Orthotics care

## 6. How am I going to be assessed?

### 6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

### 6.2. Details of early feedback on progress

Workshops in Weeks 1 and 3 are centred around providing tutor, peer, and group feedback on the development and execution of course Tasks.

### 6.3. Assessment tasks

DELIVERY MODE	TASK NO.	ASSESSMENT PRODUCT	INDIVIDUAL OR GROUP	WEIGHTING %	WHAT IS THE DURATION / LENGTH?	WHEN SHOULD I SUBMIT?	WHERE SHOULD I SUBMIT IT?
All	1	Artefact - Technical and Scientific, and Written Piece	Individual	30%	1500 words + product	Week 5	Online Assignment Submission with plagiarism check
All	2	Written Piece	Individual	30%	1800 words	Week 7	Online Assignment Submission with plagiarism check
All	3	Practical / Laboratory Skills, and Written Piece	Individual	40%	Practical OSCE 60 minutes, theory component 45 minutes.	Week 8	In Class

**All - Assessment Task 1:** Problem-Inducing Orthotic Design Report

<b>GOAL:</b>	The goal of this task is to have you apply your theoretical and evidence-based knowledge to design an orthosis to replicate a specific gait deviation. You will demonstrate your knowledge of biomechanics and orthotic theory to design, fabricate and record the outcomes of the device.		
<b>PRODUCT:</b>	Artefact - Technical and Scientific, and Written Piece		
<b>FORMAT:</b>	A 1500-word report and a manufactured device		
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>	
	1	Critical evaluation of client information and evidence-base	1 2
	2	Justification of evidence-based plan to meet client goals via a functional device	1 5
	3	Critical evaluation of client outcomes to improve further clinical decision making	1
	4	Effective communication with intended audience	4
	5	Performance of manufacture and modification of orthosis	5
<b>GENERIC SKILLS:</b>	Communication, Problem solving, Applying technologies, Information literacy		

**All - Assessment Task 2:** Evidence-Based Prosthetic/Orthotic Prescription

<b>GOAL:</b>	The goal of this task is to continue development of taking an initial client assessment and creating an evidenced-based orthotic or prosthetic prescription.		
<b>PRODUCT:</b>	Written Piece		
<b>FORMAT:</b>	Written report		
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>	
	1	Critical evaluation and communication of important client information	1 4
	2	Justification of client centred goals relating to client information	1 2
	3	Proposal and communication of evidence-based plans for shared decision making	2 4
	4	Justification of proposed evidence-based plan that addresses client-centred goals	2
	5	Effective communication with intended audience	4
<b>GENERIC SKILLS:</b>	Communication, Organisation		

### All - Assessment Task 3: OSCE – Advanced Skills: Practical and Theory

<b>GOAL:</b>	The goal of this task will be the demonstration of skills relating to physical assessment, communication, fitting and problem solving. You will be able to demonstrate your understanding of theory consolidated over the session.		
<b>PRODUCT:</b>	Practical / Laboratory Skills, and Written Piece		
<b>FORMAT:</b>	An on campus performance OSCE and an online theoretical component.		
<b>CRITERIA:</b>	<b>No.</b>		<b>Learning Outcome assessed</b>
	1	Demonstration of safe and effective assessment, device modification, and psychomotor skills	3 5
	2	Evaluation of information via critical thinking to facilitate informed decision making	1 3 4
	3	Effective communication of critical thinking to the intended audience	3 4
<b>GENERIC SKILLS:</b>	Communication, Problem solving		

## 7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

## 8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

### 8.1. Prescribed text(s) or course reader

Please note that you need to have regular access to the resource(s) listed below. Resources may be required or recommended.

REQUIRED?	AUTHOR	YEAR	TITLE	EDITION	PUBLISHER
Required	Kevin C. Chui,Sheng-Che Yen,Michelle M. Lusardi,Milagros Jorge	2019	Orthotics and Prosthetics in Rehabilitation	4th	Saunders

### 8.2. Specific requirements

You will be required to wear Program polo, name badge, Student ID, approved pants, and closed toe shoes during client encounters.

## 9. How are risks managed in this course?

Risk assessments have been performed for all laboratory classes and a moderate level of health and safety risk exists. Moderate risks are those associated with laboratory work such as working with chemicals and hazardous substances. You will be required to undertake laboratory induction training and it is also your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the [online induction training for students](#), and following the instructions of the University staff

## 10. What administrative information is relevant to this course?

### 10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

## 10.2. Assessment: Additional Requirements

### Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

- The final mark is in the percentage range 47% to 49.4%
- The course is graded using the Standard Grading scale
- You have not failed an assessment task in the course due to academic misconduct

## 10.3. Assessment: Submission penalties

Late submission of assessment tasks may be penalised at the following maximum rate:

- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.
- 10% (of the assessment task's identified value) for the third day - 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.
- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task. Weekdays and weekends are included in the calculation of days late. To request an extension you must contact your course coordinator to negotiate an outcome.

## 10.4. SafeUniSC

UniSC is committed to a culture of respect and providing a safe and supportive environment for all members of our community. For immediate assistance on campus contact SafeUniSC by phone: [07 5430 1168](tel:0754301168) or using the [SafeZone](#) app. For general enquires contact the SafeUniSC team by phone [07 5456 3864](tel:0754563864) or email [safe@usc.edu.au](mailto:safe@usc.edu.au).

The SafeUniSC Specialist Service is a Student Wellbeing service that provides free and confidential support to students who may have experienced or observed behaviour that could cause fear, offence or trauma. To contact the service call [07 5430 1226](tel:0754301226) or email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au).

## 10.5. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the [Learning Advisers](#) web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au).

## 10.6. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to [Student Hub](#), email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au) or call 07 5430 1226.

## 10.7. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, [AccessAbility Services](#) can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to [Student Hub](#), email [AccessAbility@usc.edu.au](mailto:AccessAbility@usc.edu.au) or call 07 5430 2890.

## 10.8. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit <https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

## 10.9. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The [Student Charter](#) sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

## 10.10.General Enquiries

### In person:

- **UniSC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **UniSC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **UniSC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **UniSC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **UniSC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **UniSC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

**Tel:** +61 7 5430 2890

**Email:** [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au)