

# HLT323 Advanced Concepts in Prosthetics & Orthotics

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

2024 | Session 3

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](https://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

This course will introduce you to more advanced concepts in prosthetics and orthotics, either topics that are inherently more difficult or are newer developments within the field. This series of workshops will be run in conjunction with experts in their fields whenever possible and use a practical approach to learning the material. This course will have you critically evaluate and communicate strategies of best practice regarding the use of technology and techniques to improve the quality and provision of prosthetic and orthotic 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	4hrs	Week 1	8 times
<b>Tutorial/Workshop 1</b> – Tutorial/Workshop	2hrs	Week 1	8 times
<b>Tutorial/Workshop 2</b> – Tutorial/workshop	4hrs	Week 1	8 times

### 1.3. Course Topics

Module 1: Advanced Lower Limb Prosthetic and Orthotic Technologies and Techniques

Module 2: Specialised Clinical Practice

Module 3: Advanced Practices using Digital Processes (CAD, CAM, 3D Manufacture)

## 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 Communicate effectively, based on intended audience, to instruct others on a new technique, technology, or concept.	Creative and critical thinker Empowered	1.1.7, 1.1.8, 6.1.1, 6.1.2, 6.1.5, 6.2.1, 6.2.2, 6.2.4
2 Critically examine new technologies, techniques and/or knowledge in prosthetics and orthotics and discuss implications to clinical care.	Creative and critical thinker Empowered	5.3.3, 6.1.1, 6.1.3, 6.2.1, 6.2.2, 6.2.4, 6.2.5
3 Provide a persuasive justification for improving client outcomes through evidence-based prosthetic and orthotic intervention strategies.	Creative and critical thinker Sustainability-focussed	1.3.1, 1.3.2, 2.1.1, 2.1.2, 2.2.1, 2.3.2, 2.3.6, 2.3.8, 2.5.1, 2.5.2, 4.2.3, 6.2.1, 6.2.2, 6.2.3
4 Evaluate and apply advanced clinical theories, practices, technologies and concepts to inform current and future best practice.	Empowered	1.2.3, 1.2.4, 4.3.2, 5.1.2, 6.1.2, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5

#### \* Competencies by Professional Body

CODE	COMPETENCY
THE AUSTRALIAN ORTHOTIC PROSTHETIC ASSOCIATION	
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
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
1.2.3	Establishes and maintains effective working relationships with other health professionals to enhance collaborative practice and client access to care
1.2.4	Actively participates within the health professional team and seeks opportunities to demonstrate professional excellence
2.1.1	Identifies subjective and objective information to enable development of an appropriate orthotic/prosthetic care plan
2.1.2	Selects assessment techniques, outcome measures and other tools/instruments based on evidence, which are relevant to the client's presentation
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
2.3.6	Determines and justifies the design details of the orthosis/prosthesis prescription
2.3.8	Selects appropriate outcome measures
2.5.1	Adheres to legislative and organisational requirements for all documentation
2.5.2	Maintains legible, concise and accurate documentation using contemporary methods
4.2.3	Prescribes and designs orthosis/prosthesis to achieve optimal outcomes within the approved budget for client treatment
4.3.2	Participates in audit processes and quality improvement initiative
5.3.3	Recognises where further training is required to conduct competent practice
5.1.2	Identifies workplace hazards and acts to eliminate or reduce risks

CODE	COMPETENCY
6.1.1	Undertakes independent learning to further own knowledge and skills on a continuous basis
6.1.2	Shares skills and knowledge with health professional colleagues and students
6.1.5	Offers constructive feedback and assistance to other health professionals
6.2.1	Assesses and critically analyses sources of evidence
6.2.2	Demonstrates a systematic approach to analysis and decision making
6.2.4	Demonstrates knowledge of new techniques and technology relevant to orthotics/prosthetics
6.1.3	Participates in health professional training and research as opportunities arise
6.2.5	Critically and continuously evaluates practice
6.2.3	Integrates evidence and new learning into practice to improve health outcomes for clients

## 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

HLT322 and enrolled in Program SC307 or 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)

Clinical and technical skill in prosthetics and orthotics

## 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

In week 3, you will take part in a formative quiz to give you early feedback on progression

### 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	Written Piece	Individual	35%	1500 words	Week 4	Online Assignment Submission with plagiarism check
All	2	Artefact - Creative	Individual	30%	Poster: 1000 words Presentation: 4 mins	Week 7	Online Assignment Submission with plagiarism check
All	3	Examination - not Centrally Scheduled	Individual	35%	120 minutes	Week 8	Online Test (Quiz)

### All - Assessment Task 1: Justification of Advanced Technologies

<b>GOAL:</b>	The goal of this task to have you provide convincing evidence that a proposed treatment is the most reasonable and necessary for a client using evidence and clinical reasoning.		
<b>PRODUCT:</b>	Written Piece		
<b>FORMAT:</b>	A professional letter		
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>	
	1	Critical examination of the evidence base relating to P&O intervention	2 3
	2	Discussion of evidence base to inform P&O intervention	2 3
	3	Justification of new technologies/techniques for evidence-based clinical care	2 3
	4	Effective communication of persuasive justification to intended audience	1

### All - Assessment Task 2: Infographic on Advance Practice

<b>GOAL:</b>	The goal of this task is to have you research an advancing technology in P&O and present your findings to an audience.		
<b>PRODUCT:</b>	Artefact - Creative		
<b>FORMAT:</b>	You will be required to produce a one-page infographic poster and present this via oral presentation in class		
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>	
	1	Critical examination of evidence and literature relating to new technologies, techniques and/or P&O interventions	2
	2	Application of critically examined information about advanced clinical topics and the impact to clinical care.	2 4
	3	Communication of applied advanced clinical practices and technologies to intended audience (poster)	1 4
	4	Communication of applied advanced clinical practices and technologies to intended audience (presentation)	1 4

### All - Assessment Task 3: Final Examination

<b>GOAL:</b>	The final examination will allow you to display your knowledge of the topics presented within the 8 week session and how they relate to clinical care of evidence based practice.		
<b>PRODUCT:</b>	Examination - not Centrally Scheduled		
<b>FORMAT:</b>	The final examination will consist of multiple choice, T/F, short answer questions on the topics presented in the course and will include long answer/essay questions.		
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>	
	1	Discussion of new technologies in P&O and the impact to clinical care	2
	2	Justification of evidence-based P&O strategies to improve client outcomes	3
	3	Application of clinical theories and practices to inform current and future best practice.	4

## 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, Milagros Jorge, Michelle M. Lusardi	2019	Orthotics and Prosthetics in Rehabilitation	4th	Saunders

### 8.2. Specific requirements

You will be required to wear Program uniform, Student name badge, Student ID, approved pants, and closed toe shoes during client and/or professional guest 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)