



## COURSE OUTLINE

# HLT204 Clinical Foundations in Orthotics

**Course Coordinator:** Brian Delaney (bdelaney@usc.edu.au) **School:** School of Health and Behavioural Sciences

2021 | Semester 1

USC Sunshine Coast

**ON CAMPUS**

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

*Please go to the USC website 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

Building upon skills introduced in HLT102, this course introduces principles of orthotic treatment of the lower limb and spine in musculoskeletal conditions. You will learn how orthoses are designed, how they interact with the body to control movement, and skills related to the assessment of and manufacture of an orthosis. Projects are centred on enhancing psychomotor skills and familiarity with materials/techniques used in orthotics through the fitting of prefabricated and custom-fabricated orthoses.

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

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
<b>ON CAMPUS</b>			
<b>Lecture</b> – Lecture/tutorial	2hrs	Week 1	13 times
<b>Laboratory</b>	3hrs	Week 1	13 times

### 1.3. Course Topics

Module 1: Lower limb orthoses and biomechanics

Module 2: Musculoskeletal evaluation and conditions

Module 3: Spinal orthoses

## 2. What level is this course?

200 Level (Developing)

Building on and expanding the scope of introductory knowledge and skills, developing breadth or depth and applying knowledge and skills in a new context. May require pre-requisites where discipline specific introductory knowledge or skills is necessary. Normally, undertaken in the second or third full-time year of an undergraduate programs.

## 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
<p>1 Describe characteristics of common musculoskeletal aetiologies and discuss common orthotic and related treatment strategies.</p>	<p>Knowledgeable Empowered</p>	<p>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 2.4.1 - Considers all relevant characteristic of the client during orthosis/prosthesis fitting and review processes 6.1.1 - Undertakes independent learning to further own knowledge and skills on a continuous basis 6.2.1 - Assesses and critically analyses sources of evidence 6.2.3 - Integrates evidence and new learning into practice to improve health outcomes for clients</p>
<p>2 Describe the relevant factors and evidence for selecting and/or modifying orthotic intervention for the spine and/or lower limb to appropriately manage a client with musculoskeletal impairment.</p>	<p>Empowered Engaged</p>	<p>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 2.4.1 - Considers all relevant characteristic 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 3.1.1 - Utilises appropriate casting, measuring and/or cast modification techniques to facilitate fabrication 5.2.1 - Recognises the responsibility to do no harm 5.3.1 - Works within professional scope of practice, consent of client and/or carer and authority of employer</p>
<p>3 Critically evaluate the assessment, fit and function of a lower limb or spinal orthosis using professional terminology to inform future performance and practice on yourself and for a peer.</p>	<p>Empowered Engaged</p>	<p>2.1.3 - Performs assessment professionally, safely and effectively 2.4.2 - Uses appropriate techniques to ensure optimal fit and function of the orthosis/prosthesis 2.4.4 - Evaluates and monitors treatment outcomes using patient feedback and/or outcome measures 2.4.5 - Modifies treatment to ensure best possible outcomes are maintained 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</p>

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
<p>4 Demonstrate developing technical competence using common techniques in casting and fabrication used to create a thermoplastic lower limb orthosis</p>	Engaged	<p>3.1.1 - Utilises appropriate casting, measuring and/or cast modification techniques to facilitate fabrication</p> <p>3.1.2 - Fabricates and/or coordinates the optimal fabrication of orthoses/prostheses</p> <p>3.1.3 - Performs and/or coordinates requires modifications of orthoses/prostheses</p> <p>3.2.1 - Assesses the orthosis/prosthesis for structural safety at appropriate intervals</p> <p>5.1.1 - Adheres to legislation and workplace guidelines relating to safety</p> <p>5.1.2 - Identifies workplace hazards and acts to eliminate or reduce risks</p> <p>5.2.1 - Recognises the responsibility to do no harm</p> <p>5.3.1 - Works within professional scope of practice, consent of client and/or carer and authority of employer</p> <p>5.3.2 - Seeks assistance or refers on when beyond own level of competence</p>
<p>5 Demonstrate safe developing competence and professionalism in the physical assessment (including prompt communicative feedback) on a simulated client with musculoskeletal impairment for assessment, measurement, and fitting of a lower limb and/or spinal orthosis.</p>	Engaged	<p>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</p> <p>1.1.2 - Ensures the client is the focus of the care pathway</p> <p>1.1.4 - Obtains informed consent from the client and/or carer prior to the provision of care</p> <p>1.1.5 - Listens effectively to the client and/or carer</p> <p>1.1.6 - Encourages the client and/or carer to participate and provide feedback</p> <p>1.1.7 - Provides prompt, accurate and comprehensive information in clear terms to enable the client and/or carer to make an informed decision</p> <p>2.1.3 - Performs assessment professionally, safely and effectively</p> <p>3.1.1 - Utilises appropriate casting, measuring and/or cast modification techniques to facilitate fabrication</p> <p>3.2.1 - Assesses the orthosis/prosthesis for structural safety at appropriate intervals</p>

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

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

### 5.1. Pre-requisites

HLT102 and LFS122 and enrolled in Program SC367 with a Prosthetics and 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 skills related to PO and anatomy

## 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 4, you will receive formative feedback on Task 1 Portfolio to help prepare for future sessions.

### 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	Portfolio	Individual	30%	1000 words	Refer to Format	Online ePortfolio Submission
All	2	Report	Individual	30%	1500 words	Week 11	Online Assignment Submission with plagiarism check
All	3	Examination	Individual	40%	120 minutes	Exam Period	Exam Venue

#### All - Assessment Task 1: Practical Competencies Portfolio

<b>GOAL:</b>	The goal is to improve the connection of theory learned in class and prior knowledge regarding orthotic design, physical evaluation, anatomy, and biomechanics to the performance, as well as develop your ability to critique your own and others work, in the areas of physical assessment, problem solving orthotic fit, and communication skills.																																	
<b>PRODUCT:</b>	Portfolio																																	
<b>FORMAT:</b>	<p>The Portfolio is completed throughout the semester with emphasis in areas such as:</p> <ul style="list-style-type: none"> <li>• Physical Assessment (ROM/MMT)</li> <li>• Fitting Orthoses/Problem Solving</li> <li>• Basic Client Communication and Feedback</li> <li>• Self and Peer Critique</li> </ul> <p>The portfolio will assess skill development through pre-defined rubrics and assess development of self and peer critique methods. The portfolio will have assessments due weeks 4, 8, 9,10,13.</p>																																	
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## All - Assessment Task 2: AFO Tuning Report

<b>GOAL:</b>	The report will provide an opportunity to reinforce skills developed in the first half of the semester in evaluation and fabrication skills and place them within the context of a project looking at the efficacy of AFO management and improving outcomes through AFO tuning concepts, using assessment, fabrication, and design concepts in an applied project.	
<b>PRODUCT:</b>	Report	
<b>FORMAT:</b>	<p>The report will discuss the results of and implications of design and alignment using real-world applications in P&amp;O completed during lab. The report will require you to discuss, using principles, methods and critique of primary literature, how these elements work together to improve P&amp;O intervention and the implications on future clinical practice and efficacy of AFO management. Additionally, the project will include your technical proficiency in implementing the project.</p> <p>The report will consist of the following:</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Critique of Current Literature</li> <li>• Methods</li> <li>• Results</li> <li>• Discussion</li> </ul> <p>You will be provided with 2 sources of primary literature in class to start the critique and are required to find an additional 2 sources that conflict like that provided in class. These four sources are to be used at a minimum in your report.</p>	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	1 Demonstration of technical competency	2 3 4
	2 Critique of literature	2 3 5
	3 Application of P&O principles	1 2 3 4 5
	4 Comprehension of Results	2 3
	5 Implications to Clinical Care	1 2 3 4 5
	6 Professionalism	3 5

## All - Assessment Task 3: Final Exam

<b>GOAL:</b>	The purpose of the final exam is to ensure you understand the theoretical knowledge and terminology related to orthotic care and musculoskeletal disorders presented in online.	
<b>PRODUCT:</b>	Examination	
<b>FORMAT:</b>	A 120-minute examination which will consist of a variety of multiple choice, T/F, and fill-in-the-blank questions, short answers and long answer questions.	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	1 Accuracy of knowledge	1 2
	2 Professional language	

## 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. Directed study hours may vary by location. 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 Blackboard 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	PUBLISHER
Required	Kevin C. Chui, Sheng-Che Yen, Milagros Jorge, Michelle M. Lusardi	2019	Orthotics and Prosthetics in Rehabilitation	Saunders

### 8.2. Specific requirements

You will be required to wear Program polo (available from USC Marketing), Student name tag, Student ID, approved pants, and closed toe shoes during client and/or professional 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 Blackboard, are electronically checked through SafeAssign. This software allows for text comparisons to be made between your submitted assessment item and all other work that SafeAssign has access to.

### 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. 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).

#### 10.5. 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.

#### 10.6. 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.

#### 10.7. 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
- Administration of Central Examinations
- Deferred Examinations
- Student Academic Misconduct
- Students with a Disability

Visit the USC website: <http://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

#### 10.8. General Enquiries

##### In person:

- o **USC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- o **USC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- o **USC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- o **USC Gympie** - Student Central, 71 Cartwright Road, Gympie
- o **USC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- o **USC 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)