

Western Continuing Studies

ADVANCED ORTHOTICS SCIENCE FOOT6002

Course Outline

Description:

The Advanced Orthotics Science course builds on the principles introduced in Basic Orthotic Science and applied specific biomechanical and physiological concepts that allow the practitioner better accuracy in responder selection and orthosis design. Considerations for orthosis integration into modern footwear technology are presented.

Topics:

- Outcome predication concepts for orthotic therapy
- Advanced concepts of footwear functional elements presented including footwear energetics and transition dynamics.
- Practical and clinical considerations of orthosis and footwear integration are discussed

Pre-requisites: Students must have successfully completed Basic Orthotic Science (FOOT6001) to be eligible for this course.

Course Goals:

This course helps practitioners consider that some patients with a selected condition will more consistently respond to orthotic treatment than others through examples in both general medicine and foot care. In addition, practitioners will be able to harness the full functional potential of conventional footwear to aid in the development of their treatment plans, as well as appreciate the implications of orthosis to footwear integration.

Course Objectives:

At the completion of this course, the student will be able to:

- Examine how to identify responders to orthotic therapy within selected indication groups
- Analyze contemporary functional elements of footwear that are complementary of orthosis design
- Integrate footwear and orthosis design to optimize both clinical and pragmatic (i.e. footwear fit) outcomes.

Texts/Readings:

Readings for this course will be a selection of contemporary peer-reviewed journal articles curated to support concepts in the course.

Evaluation:

Participation	20%
Quiz #1	10%
Quiz #2	10%
Quiz #3	10%
Assignment	25%
Final Exam	25%

Participation:

Participation marks are earned in forum discussions on OWL, and in any Zoom Group Meetings, by taking part in and encouraging discussions with your online classmates throughout the course. For information on how marks are allotted for your participation see the section below titled “**Online Participation Grading Chart**”.

Quiz #1: A quiz on the material from Units 1 &. The format of the exam will be multiple choice and short answers. Once you begin, you will have one hour to complete the quiz.

Quiz #2: A quiz on the material from Units 3 & 4. The format of the exam will be multiple choice and short answers. Once you begin, you will have one hour to complete the quiz.

Quiz #3: A quiz on the material from Unit 5 . The format of the exam will be multiple choice and short answers. Once you begin, you will have one hour to complete the quiz.

Assignment:

This course has had a particular focus on the clinical implications of footwear. Using a Voice Thread PowerPoint presentation not longer than 10-slides, students are to select a clinical indication and then outline their orthotic and footwear treatment plan. Treatments should include specific orthotic elements, as well as the make and model of the footwear they would recommend. Outlining what you would recommend will only get you part marks; you will need to justify your treatment selections with particular attention to footwear functional elements and how they would complement the corresponding orthosis design, AND mitigate their selected condition’s pathomechanics. Presentations will be posted as a voice recorded PowerPoint presentation attachment on the assignment submission window.

Final Exam:

This exam will test you on information from Units 1 through 5 using a combination of short answer and case study format. The exam is scheduled synchronously. It will become available at 7pm Eastern and close at 10pm Eastern.

Notes on Assignment:

- Must be professional and academic in style and content
- Must present ideas in a logical and well thought out flow
- Arguments, analysis, and conclusions must be based on clearly identified research and sources

- Must cite all references from other sources at the end of the presentation

Grading:

A+	90-100	One could scarcely expect better from a student at this level
A	80-89	Superior work which is clearly above average
B	70-79	Good work, meeting all requirements, and eminently satisfactory
C	60-69	Competent work, meeting requirements
D	50-59	Fair work, minimally acceptable
F	below 50	Fail

Online Participation Grading Chart:

Participation marks will be awarded to students based on their level of participation in group discussion. The following chart will act as a guide for assessing student participation in this online course.

Grade Criteria

5	<p>The student participates in classroom discussion providing relevant responses more than 5 times during the week.</p> <p>Replies to discussion questions, instructor comments, and the responses of other students is presented in a positive and critical manner.</p> <p>The student responds in a timely manner (allowing enough time for fellow students to respond, and not posting on the last days of the unit).</p> <p>Responses are of a high quality showing that an obvious effort has been made to research the answer. Responses offer new perspectives on course material and spark discussion amongst the class.</p>
4	<p>The student participates with relevant responses 4-5 times during the week.</p> <p>Responses are positive and critical in manner.</p> <p>The student responds in a timely manner (allowing enough time for fellow students to respond, and not posting on the last days of the unit).</p> <p>The student offers new ideas and responds to the contributions of others.</p>
3	<p>The student provides relevant contributions 3-5 times during the week.</p>

The student responds before the end of the unit.

The student *occasionally* offers new ideas and responds to others.

2 The student's contributions are weaker in quality and less than 3 responses per week.

The student's responses are late in the week or not always on time.

The student does not offer any new ideas, and responses to fellow students are few.

1 The student rarely provides contributions to the class discussion.

The student does not respond on time.

The student does not respond to the contributions of the other students.

0 The student provides little or no discussion.

Information is contributed only when asked to by the instructor, and responses are negative or disagreeable to the instructor/fellow students.

Responses show little in the way of comprehension of course material. The responses are usually limited to "I agree", "Me too" or the like.

Policy on Attendance:

Attendance is mandatory for all scheduled classes (in person and online Zoom sessions). Should a student miss a class due to illness, the instructor must be notified prior to the class start. Students who experience an extenuating circumstance (illness, injury or other,) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration by emailing the instructor of the impacted course and cc'ing the academic program manager on the message. More than two absences will require students to supply the appropriate documentation. Please review the policy on Accommodation for Medical Illness.

Proctortrack:

Tests and examinations in this course will be conducted using the remote proctoring service *Proctortrack*. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide personal information (including some biometric data) and the session will be recorded. More information about this remote proctoring service is available in the Online Proctoring Guidelines at the following link:

<https://www.uwo.ca/univsec/pdf/onlineproctorguidelines.pdf>. Completion of this course will require you to have a reliable internet connection and a device that meets the technical

requirements for this service. Information about the technical requirements are available at the following link: <https://www.proctortrack.com/tech-requirements/>

When will I receive my grades?

Assignments will be marked, and the grades available, as soon as possible after they are due. Final grades will be available within two weeks after the last scheduled day of the course and can be viewed through the [Student Centre account](#).

Grading and Program Progression:

A minimum overall grade average of 70% is required. Students must obtain an average of 70% in all micro-credential courses to successfully complete any certificate.

Western Digital Badge

If you have met the course requirements for this Western approved micro-credential, you will receive an email from MyCreds to claim your digital badge. Badges are embedded with data that verifies your skills and achievements. Share them with your employer, on LinkedIn and other social media sites.

Scholastic Offences

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offences; please refer to the section on “Scholastic Offences” in the current [Academic calendar](#). Such offences include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course any academic work for which credit has previously been obtained or is being sought in another course in this University or elsewhere (without the knowledge and approval of the instructor to whom the work is submitted). Students enrolled in non-degree courses are expected to abide by the University’s code of conduct.

Code of Student Conduct:

The purpose of the Code of Student Conduct is to define the general standard of conduct expected of students registered at Western University, provide examples of behaviour that constitutes a breach of this standard of conduct, provide examples of sanctions that may be imposed, and set out the disciplinary procedures that the University will follow. For the complete Code of Student Conduct: <http://www.uwo.ca/univsec/pdf/board/code.pdf>.

Plagiarism:

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between Western University and Turnitin.com (<http://www.turnitin.com>).

Requesting Academic Accommodation:

We recognize that, from time-to-time, and for varied reasons, students may require accommodation for assignments, tests, or other academic responsibilities. The following information should be used as a guideline for you to balance fairness with personal accountability as you work to fulfill course and program requirements. If you have any questions about these details, please contact the Program Manager.

- [Accommodation for Students with Disabilities](#) - [Academic Support and Engagement \(ASE\)](#) arranges academic accommodation for classes, exams, internships and other course or program activities. *Note that accommodation from previous studies does not transfer to Diploma/Certificate programs.*
- [Accommodation for Medical Illness](#)
- [Accommodation for Religious Holidays](#)
- If you require accommodation for other human-rights based needs that do not fall under one of the above categories, please contact your instructor directly with your accommodation request. Approval of non-medical or non-human rights-based accommodations is at the discretion of course instructors, who may consult with the Program Manager in some circumstances.

Course Schedule:

Each week a new Unit will be introduced. Each Unit will consist of independent readings, lecture notes, and interactive learning applications. FOOT6002 also features forum discussions throughout the course and a case-report assignment.

Week 1:	Unit 1 – Introduction to FOOT6002 and Introduction to Responder Selection in Medicine
Week 2:	Unit 2 – Identifying responders with knee pain to orthotic therapy (Quiz)
Week 3:	Unit 3 – Footwear Science I: Functional Elements in Contemporary Off-The-Rack Footwear: Movement Assist and Energetics
Week 4:	Unit 4 – Footwear Science II: Functional Elements in Contemporary Off-The-Rack Footwear: Transition Elements and Stability (Quiz)
Week 5:	Unit 5 – Additional Therapeutic Applications of Footwear. – . (Quiz)
Week 6:	Case Series Responder Assignment Presentations
Week 7:	Final Exam