

**University of Nevada, Las Vegas  
School of Allied Health Sciences  
Department of Physical Therapy**

<b><u>Course Number:</u></b>	DPT 750
<b><u>Course Title:</u></b>	Prosthetics and Orthotics
<b><u>Credit Hours:</u></b>	2
<b><u>Lecture Hours:</u></b>	2 hours/week
<b><u>Weekly Schedule:</u></b>	Monday 1:30 pm to 3:30 pm
<b><u>Location:</u></b>	BHS 215
<b><u>Instructor(s):</u></b>	Szu-Ping Lee, PT, PhD Office hours: by appointment Office location: BHS 312 Office telephone: 702-895-3086 Email: <a href="mailto:szu-ping.lee@unlv.edu">szu-ping.lee@unlv.edu</a>
<b><u>Graduate Assistant(s):</u></b>	N/A

**Course Description:**

Evaluation of medical, surgical and prosthetic and rehabilitation management of amputations. Discussion of design, fabrication and fitting of prosthetic devices as well as general orthotic principles examined. Basic clinical problem solving skills integrated in the context of prosthetic and orthotic management of patients.

**Course Objectives:**

The following objectives are aligned with curriculum content from the Commission on Accreditation in Physical Therapy Education (Evaluative Criteria of PT Programs-updated 11/2012), the APTA Minimum Required Skills of Physical Therapist Graduates at Entry-Level core document content (updated 10/1/27013), and the Normative Model of Physical Therapist Professional Education: Version 2004.

Additionally, this course has been designed to be consistent with the following guidelines and recommendations:

- APTA Neurology Section: Neurologic Entry-Level Curricular Content Integrated with a Normative Model of Physical Therapist Professional Education

- Evidence-Based Practice Special Interest Group, Section on Research, American Physical Therapy Association, Doctor of Physical Therapy Education Evidence-Based Practice Curriculum Guidelines

**At the completion of the course the student are expected to:**

1. Basic knowledge regarding effective care of individuals with ankle, foot, lower and upper extremity amputations.
2. Basic understanding of biomechanical movement analysis
3. Describe the biomechanics and state the functional significance of each phase of the normal gait patterns.
4. Identify various types of lower extremity prosthetic and orthotic devices and discuss the functions of their principle components.
5. Compare/contrast ways in which prosthetic gait may produce deviation from normal gait for ankle-foot, below-knee, and above-knee amputees.
6. Justify indications, contraindications, advantages, and disadvantages of various orthotic devices.
7. Identify various types of orthotics and discuss the function of their principle components.
8. Differentiate between materials used in the fabrication of orthotics to include the bases for selection of materials for specific purposes.
9. Discuss the collaborative relationship between orthotists, prothetists, and physical therapists.
10. Discuss ways in which intervention may be modified in response to patient status.

**Course Structure:**

The format for instruction for this course will be a combination of lecture, demonstration, discussion, alongside laboratory and clinical involvement.

**Evaluation Methods:**

**1. Testing**

**Written exams**

There will be two exams given throughout the course. Each will be worth 50% of the final grade. If any student does not or cannot take the final due to an emergency, then plans must be made at the discretion of the professor to complete all coursework within a specified time period.

**2. Grading**

The final course grade is a letter grade. The course grade will be based on the following:

Midterm Exam: 50%

Final Comprehensive Exam - 50%

**Numeric and Letter Grade Translation (no rounding!)**

A	93-100	B-	80-82
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A-	90-92	C+	77-79
B+	87-89	C	73-76
B	83-86	F	<73

## **Instructional Practices:**

### **1. Teaching Methods:**

- a. Lecture
- b. Laboratory sessions with examples and personal instruction
- c. Class discussion
- d. Student self-study
- e. Clinical visits

### **2. Teaching Aides:**

- a. White board
- b. Overheads
- c. Slides
- d. Video
- e. Guest patients

### **3. Student responsibilities:**

- a. Attention and active participation are required in all sessions. Each student is expected to prepare for the lecture and lab session by reading the required materials prior to that session.
- b. Any student having difficulty with the material should immediately seek assistance and counseling from the instructor of the course.
- c. Lab clothes will be required for the lab sessions associated with this course. This may consist of jogging shorts, t-shirt and tennis shoes.
- d. Each student is expected to act according to the guidelines of Professional Abilities set forth in the Department of Physical Therapy Student Manual.

### **4. Course Policies**

- a. For general Course Policies see the Department of Physical Therapy Student Manual.
- b. Academic Misconduct – Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the Student Academic Misconduct Policy (approved December 9, 2005) located at: <http://studentconduct.unlv.edu/misconduct/policy.html>.

- c. Copyright – The University requires all members of the University Community to familiarize themselves and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://provost.unlv.edu/copyright/statements.html>.
- d. Disability Resource Center (DRC) – The UNLV Disability Resource Center (SSC-A 143, <http://drc.unlv.edu/>, 702-985-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to me during office hours so that we may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach me before or after class to discuss your accommodation needs.
- e. Religious Holidays Policy – Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor no later than the end of the first two weeks of classes of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. This policy shall not apply in the event that administering the test or examination at an alternate time would impose an undue hardship on the instructor or the university that could not reasonably be avoided. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=4&navoid=164>.
- f. Tutoring – The Academic Success Center (ASC) provides tutoring and academic assistance for all UNLV students taking UNLV courses. Students are encouraged to stop by the ASC to learn more about subjects offered, tutoring times and other academic resources. The ASC is located across from the Student Services Complex (SSC). Students may learn more about tutoring services by calling (702) 895-3177 or visiting the tutoring web site at: <http://academicsuccess.unlv.edu/tutoring/>.
- g. Rebelmail – By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu.
- h. Library Resources – Students may consult with a librarian ([www.library.unlv.edu/consultation](http://www.library.unlv.edu/consultation)) about research needs. For this class, the subject librarian is Xan Goodman. UNLV Libraries provides resources to support students' access to information. Discovery, access, and use of information are vital

skills for academic work and for successful post-college life. Access library resources and ask questions at [www.library.unlv.edu/](http://www.library.unlv.edu/)

**Required Texts:**

1. Lecture and lab materials
2. Prosthetics & Orthotics in Clinical Practice – A Case Study Approach: Bella J. May, Margery A. Lockard, F.A. Davis, 2011

**Recommended Readings:**

1. Assign in class.
2. Orthotics and Prosthetics in Rehabilitation: Lusardi M, Nielsen C., Butterworth Heinemann Co., (3rd edition) 2012.