Course Title: Prosthetics & Orthotics (2 Credit Hours)
Course Number: PHT 6702C (Sections 7312 & 7F70)
Course Semester and Year: 2024 Summer Semester, Year 2
Delivery Format: On-campus and Online
E-learning: https://ufl.instructure.com/courses/481748

Course Location: Virtual Lectures and CLC space @ CVS 2nd floor (**except for splinting on Friday, 6/14/2024, lab in HPNP)

Course Dates and Times:
Mondays & Thursdays 9am-12pm
**except for splinting lab on Friday, 6/14/2024: split based on lab groups: 1-2:30pm and 2:45-4:15pm)
And
lab with OT on 7/18/2024: split based on lab groups: 9-10:30am or 12:45-2:15pm

Course Instructor: Donovan Lott, PT, PhD, CSCS
Email Address: djlottpt@phhp.ufl.edu
Phone: (352) 273-9226
Office: 1156 of HPNP
Office Hours: Before or after class at CLC or by appointment
Teaching Assistant: Alicia Turner, PT, DPT, CEAS, CEFE, AOEAS
   kinseya@ufl.edu
Preferred Course Communications: email

Course Prerequisites: Course participation is limited to the entry-level DPT student in his/her second year of the UF program

Course Description:
Management of patients with amputations and conditions requiring orthotics will be emphasized. The basic components of the course include types of orthotics and prosthetics, fitting, exercise programs, gait analysis, and gait training. A brief overview of upper extremity orthotics and prosthetics will be provided.

Course Objectives:
Upon completion of this course the student will be able to:
1. Define, discuss, and describe how the various components of orthotics control the lower extremity and impact alignment and gait.
2. Discuss and describe how orthotics are used for prevention of injury, specific conditions, and protection (i.e. after surgery, neuropathic foot, etc.).
3. Discuss and describe how dynamic and static orthoses impact movement of the upper extremity.
5. Discuss and describe the major causes of amputation, levels of amputation, and the relationship of the amputation to expected outcome.
6. Determine appropriate pre-operative and post-operative care and education for the lower extremity amputee, including positioning, exercises, hygiene procedures for residual limb care, residual limb wrapping, home program, and psychological support based on the examination findings.

7. Differentiate between the components, biomechanics, and fitting principles of prosthetic devices and select the appropriate prosthetic device based on a patient’s diagnosis, age, life style, environmental considerations and other important examination findings.

8. Apply and discuss biomechanical principles of the gait cycle related to amputees, analyze common gait deviations for patients with lower extremity amputations, and determine possible prosthetic and amputee causes.

9. Discuss and describe how to evaluate a patient to determine possible gait deviations and a prosthetic training program that includes exercises and techniques to improve gait.

10. Identify, describe, and discuss basic levels of amputation and the basic components and control of prosthetic devices for patients with an upper extremity amputation.

11. Discuss the importance of regular communication and participation with the patient and family regarding the evaluation and treatment planning process, including goal setting and plan of care.

**Instructional/Teaching Methods and Learning Experiences:**

The course will include virtual/online lectures/videos, small group activities and discussions, lab sessions, and problem solving case studies. Analysis of video-taped gait will be expected. Guest lectures will involve professionals in the community and persons with amputations from the community. Additionally, students will be asked to review the literature to answer questions about evidence for best practice in a group assignment.

**Expectations and Responsibilities of the student:**

You are expected to actively engage in the course throughout the semester. You must come to class prepared by completing all out-of-class assignments. This preparation gives you the knowledge or practice needed to engage in higher levels of learning during the live and online class sessions. If you are not prepared for the face-to-face or virtual sessions, you may struggle to keep pace with the activities occurring in the sessions, and it is unlikely that you will reach the higher learning goals of the course. Similarly, you are expected to actively participate in the live and virtual class. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.
**Course Schedule with Content/Outline – Schedule subject to change:**
The course instructor can (and will) make changes to this schedule at his discretion. All changes will be announced during class time, through posting onto Canvas/e-learning, and/or by email (to UF address).

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 16th</td>
<td><strong>NO SYNCHRONOUS CLASS SESSION</strong></td>
</tr>
<tr>
<td>May 20th</td>
<td><strong>Guest Lecturer</strong> Dr. Greenberg: Foot orthoses</td>
</tr>
<tr>
<td>May 23rd</td>
<td>Continuation of Orthoses (Upper/Lower extremities, Spine); considerations and application</td>
</tr>
<tr>
<td>May 27th</td>
<td><strong>NO SYNCHRONOUS CLASS SESSION</strong></td>
</tr>
<tr>
<td>May 30th</td>
<td>Etiology/incidence, preventive and pre-operative care; overview of LE amputations; post-op care; neuropathic foot; phantom limb</td>
</tr>
<tr>
<td>June 3rd</td>
<td><strong>NO SYNCHRONOUS CLASS SESSION</strong></td>
</tr>
<tr>
<td>June 6th</td>
<td><strong>NO SYNCHRONOUS CLASS SESSION</strong></td>
</tr>
<tr>
<td>June 10th</td>
<td>Post-op care/dressings; residual limb wrapping; prosthetic fabrication</td>
</tr>
<tr>
<td><strong>June 14th (Fri)</strong></td>
<td><strong>Splinting lab in OT/PT classrooms/labs in HPNP</strong> <strong>Guest Lecturer</strong> Dr. Frazer</td>
</tr>
<tr>
<td>June 17th</td>
<td><strong>EXAM 1</strong></td>
</tr>
<tr>
<td>June 20th</td>
<td>TT components and considerations</td>
</tr>
<tr>
<td>June 24th</td>
<td>Continuation of TT components and considerations</td>
</tr>
<tr>
<td>June 27th</td>
<td>TF components and considerations</td>
</tr>
<tr>
<td>July 1st</td>
<td><strong>NO SYNCHRONOUS CLASS SESSION</strong></td>
</tr>
<tr>
<td>July 4th</td>
<td><strong>NO SYNCHRONOUS CLASS SESSION</strong></td>
</tr>
<tr>
<td>July 8th</td>
<td>TF cases, TT &amp; TF Checkouts, Intro to Gait Deviations</td>
</tr>
</tbody>
</table>
July 11th       Gait Deviations, Gait Training, Ther Ex
July 15th       Rehabilitation considerations
**July 18th**   **Lab with OT (9-10:30am and 12:45-2:15pm)
July 22nd       UE prosthetics
July 25th       3D printing; Technological considerations; Pediatric considerations; Cases
July 29th       Catch Up and Review
Aug 1st         EXAM 2

**Course Materials, Technology, and Readings:**
The course instructor will assign required voice-over recordings, videos, readings, and other online material for the live, synchronous, and/or asynchronous Zoom sessions.

There is no textbook that is required for this course.

The following textbook is suggested:
Lusardi, MM and Nielsen, CC. *Orthotics and Prosthetics in Rehabilitation*
The following are recommended references:
May, BJ and Lockard, MA. *Prosthetics & Orthotics in Clinical Practice: A Case Study Approach.*
Edelstein, JE and Moroz, A. *Lower-Limb Prosthetics and Orthotics: Clinical Concepts*
Seymour, R. *Prosthetics And Orthotics, Lower Limb and Spinal.*

For technical support for this class, please contact the UF Help Desk at:
- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- https://lss.at.ufl.edu/help.shtml

**Academic Requirements and Grading for Student evaluation:**
The Grading Section includes the detailed methods by which students are graded and the grading rubrics.

Performance of the student will be evaluated by quizzes, exams, a group assignment and associated reviews, and assessment of student’s display of professionalism during course sessions and communication associated with the course.
Literature Review Group Assignment (worth 30% of grade):

There will be 12 groups and each group will have a question to research.

Research the most recent literature. Each group is to select 3 articles from refereed journals, analyze the studies, case reports, etc, and report on each article to the class on Canvas via a pre-recorded video presentation or a detailed written summary. Each group will also post on Canvas a pdf of power point slides summarizing the material and 3 questions (in a short answer format) regarding the material. Please use the most up-to-date publications available and follow the directions below for both the pre-recorded video or the written summary:

1. Critically review each article.
2. Rank the 3 articles in order of best evidence.
3. Brief summary of each article (should NOT be a duplication of the abstracts).
4. Information about what each article provides to answer the assigned question and how you would use this information in clinical practice (consider reflecting on any patient(s) from your first affiliation or other experiences).
5. A conclusion answering the research question and describing how the 3 chosen articles provide supporting and/or conflicting information that a PT could use when seeing a patient.

The student led group presentations using a pre-recorded video will be expected to last a minimum of 12 minutes and a maximum of 20 minutes. Failure to adhere to this amount of time will result in a reduction of at least 10% in the score for the group. There is no standard format for the presentations, but students are encouraged to use methods that appeal to a wide range of learning styles and have fun (within reason while remaining professional).

The student led group presentations using a detailed written summary will be expected to be a minimum of 4 pages and a maximum of 7 pages (single spaced). Attachments that include up to 3 figures/tables and a reference list are not included in this required length. Failure to adhere to this amount of length will result in a reduction of at least 10% in the score for the group.

The pdf of the power point slides should contain sufficient information to include all of the 5 items mentioned in the instructions above. Appropriate use of font, pictures, spacing, etc is expected.

Students will work in groups, and each member of the group will receive the same grade for this assignment. It is the responsibility of each group to ensure that all members are contributing to the project in a manner that the group deems appropriate and necessary. However, there will be a peer assessment portion for each group that will count as 25% of your grade for this Group Assignment.

Another “review” group will be assigned to answer the original “posting” group’s 3 questions posted, and this “review” group will also pose 1 question that the “posting” group will answer. The “review” group will do an assessment of the “posting” group that will
account for 25% of the “posting” group’s grade for this Group Assignment. See Assessment of Group Assignment at end of syllabus for details concerning these grading criteria.

The instructor will also grade each group on their work (video or written assignment, power point slides, questions posed, and response made), and his score will count as 50% of your grade for this Group Assignment.

Grading Rubric to be used for the assessment of the Group Assignment, assigned questions, and assigned groups will be forthcoming.

**Quizzes/Tests (worth 70% of grade):**

**Quizzes (worth 20% of grade):**
Short quizzes will be given during the course and will be completed online without the assistance/input of anyone else (20% of grade). These quizzes will be open-note/open-book, and the student will be given at least 3 days to complete and submit each quiz. Each quiz is expected to take 45-90 minutes.

**Exams (worth 50% of grade):**
There will be two exams in this course. Each exam will consist of multiple choice, True False, and short answer/essay questions. Each student will complete each exam independently and without any notes/resources. The first exam will be worth 20% of grade, and the second exam, will be worth 30% of grade.

**Professionalism as part of grade:**
Up to 15% may be deducted from the overall grade and/or any specific assessment for lack of preparation, participation, and/or professionalism.

Grading is scored according to the grading policy; University of Florida, College of Health Professions, Department of Physical Therapy, Student Handbook.

<table>
<thead>
<tr>
<th>Percentage or points earned in class</th>
<th>93%-100%</th>
<th>90%-92%</th>
<th>87%-89%</th>
<th>83%-86%</th>
<th>80%-82%</th>
<th>70%-79%</th>
<th>60%-69%</th>
<th>Below 60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter Grade equivalent</td>
<td>A</td>
<td>A-</td>
<td>B+</td>
<td>B</td>
<td>B-</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>WF</th>
<th>I</th>
<th>NG</th>
<th>S-U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade Points</td>
<td>4.0</td>
<td>3.67</td>
<td>3.33</td>
<td>3.0</td>
<td>2.67</td>
<td>2.0</td>
<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Exam policy
Students who communicate with the instructor to obtain an excused absence can make up an exam or quiz without penalty. An exam or quiz may be made up with an unexcused absence only with permission from the instructor, but the highest point total will be 80% of the original points offered. Submitted work that is late up to 2 days will not receive any point total higher than 80% of the original points offered.

Please note: Any requests for make-ups due to technical issues MUST be accompanied by the UF Computing help desk (http://helpdesk.ufl.edu/) correspondence. You MUST e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Policy Related to Required Class Attendance
Students are expected to attend and be prepared for all virtual and in-person sessions. Students are expected to log in/arrive to these sessions in a punctual manner. Required readings/review of online materials must be done prior to the session so that discussion of the material may take place. Students are expected to read/watch any assigned materials prior to class sessions and to participate in large group and small group discussions/break out sessions. Sessions with guest lecturers are required to be attended, and attendance will be noted for these sessions. Students should contact the instructor via email as early as possible to seek approval for an excused absence. Professional communication is expected to occur regarding any potential exceptions to any of these responsibilities. Late arrivals and early departures must receive excused approval by the instructor or will be considered a breach in professional behavior.

Additional information can be found here:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Student Expectations, Roles, and Opportunities for Input

Expectations Regarding Course Behavior

Class Demeanor Expected by the Professor

- Ensure cell phones are turned off during class time.
- Avoid using laptop computers/electronic devices for tasks that are not pertinent to the lecture/lab session.
- Be respectful and polite in all interactions with your peers, guests, and instructors.
- Actively participate in labs and be engaged in lecture through attentive listening, asking questions, and discussion.
Dress Code

- Lecture or laboratory attire as per the student handbook is acceptable for lectures unless there is a guest lecturer where lecture/professional attire is expected and will be announced in advance.

Professional Behavior:

Mastering core areas of professional behavior is critical for a successful transition from the classroom to the clinical setting. We recognize the importance of these behaviors and have incorporated the development, as well as the evaluation, of these professional behaviors into each academic course.

Core areas of professional development and growth:

1. Critical Thinking
2. Communication
3. Problem Solving
4. Interpersonal Skills
5. Responsibility
6. Professionalism
7. Use of Constructive Feedback
8. Effective Use of Time and Resources
9. Stress Management
10. Commitment to Learning

*Professional Behavior is described in the DPT Student Handbook and is exemplified by the following:*

1. attendance to classes and labs,
2. timeliness,
3. attentiveness,
4. respectful and polite interaction with peers, instructors, and patients,
5. active learning as demonstrated by questions and discussion,
6. active participation in lab activities,
7. responsibility shown for maintenance, organization, and cleanliness of lab equipment and facilities,
8. leads and/or contributes to lab preparation and clean-up, as requested,
9. appropriate communication with the course instructor when absence from class is unavoidable,
10. appropriate lab and lecture attire,
11. adherence to all university policies,
12. acceptance of self-responsibility e.g., test preparation, seeking of information, seeking assistance when necessary, maintaining professional demeanor, recognizing one’s own stressors, et al.,
13. and other attributes as described on Professional Behaviors and Student Responsibilities in the Student manual.

You will receive constructive feedback from instructors for the first observed minor deviation from expected "beginning level" professional behavior (see Professional Development Tool). Repeated deviation from expected behavior will result in referral to your mentor and Professional Development Committee (PDC) to develop a growth plan to
improve behaviors to the expected level. Major/serious deviations from expected behaviors will result in referral to the Dean of Students Office (DSO) and PDC. Major or serious deviations may result in loss of points or letter grade as determined by DSO.

Up to 15% may be deducted from the overall grade and/or any specific evaluation for lack of preparation, participation, and/or professionalism.

**Communication Guidelines**

*Be respectful and kind in all communications to faculty, advisors, and your fellow students.*

When communicating in an online format, you should:

- Unless otherwise directed, always use your professor's proper title: Dr. or Prof., or if in doubt use Mr. or Ms.
- Use clear and concise language.
- Remember that all college-level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms and texting abbreviations such as "u" instead of "you."
- Use standard fonts such as Arial, Calibri or Times New Roman and use a size 10 or 12 pt. font.
- Avoid using the caps lock feature AS IT CAN BE INTERPRETED AS YELLING AND RUDE.
- Consider if the use of emoticons like :) or © is appropriate.
- Be cautious when using humor or sarcasm as the tone is sometimes lost in an email or discussion post and you may inadvertently communicate the wrong message.
- Be careful and confidential with personal information (especially other's) in emails and discussion posts.

When you send an email to your instructor, teaching assistant, or classmates, you should:

- Use a descriptive subject line.
- Be clear and concise.
- Avoid attachments unless you are sure your recipients can open them.
- Avoid unnecessary text decoration in email and HTML in favor of plain text.
- Sign your message with your name and return e-mail address.
- Think before you send the e-mail to more than one person. Does everyone really need to see your message?
- Be sure you REALLY want everyone to receive your response when you click, "reply all."
- Be sure any email you forward was intended to be passed along.

*It is always a good practice to maintain a respectful and professional tone.*

See Netiquette Guidelines:
Statement of University’s Honesty Policy (cheating and use of copyrighted materials)

Academic Integrity:
Professional behavior is critical for a successful transition from the classroom to the clinical setting. The faculty recognizes the importance of this by incorporating the development and evaluation of professional behavior into each academic course. Professional Behavior is described in the Student Handbook that each student receives and acknowledges reading/understanding upon beginning the DPT program. Professional behavior is expected at all times; including but not exclusively: during scheduled class, curricular and clinical activities, extracurricular professional events, community and clinical activities. Cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

Furthermore, students are expected to act in accordance with the University of Florida policy on academic integrity (see Student Conduct Code, the Graduate Student Handbook or these web sites for more details: https://sccr.dso.ufl.edu/students/student-conduct-code/ https://sccr.dso.ufl.edu/process/students-rights-responsibilities/ http://www.graduateschool.ufl.edu/media/graduate-school/pdf-files/handbook.pdf

Students may be referred to the Professional Development Committee if they exhibit behavior not in accordance to these standards/expectations.

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details: https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/ http://gradschool.ufl.edu/students/introduction.html
Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

**Online Faculty Course Evaluation Process**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at [https://gatorevals.aa.ufl.edu/students/](https://gatorevals.aa.ufl.edu/students/). Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via [https://ufl.bluera.com/ufl/](https://ufl.bluera.com/ufl/). Summaries of course evaluation results are available to students at [https://gatorevals.aa.ufl.edu/public-results/](https://gatorevals.aa.ufl.edu/public-results/).

**Policy Related to Guests Attending Class**

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are **not** permitted to attend either cadaver or wet labs. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy: [http://facstaff.phhp.ufl.edu/services/resourceguide/getstarted.htm](http://facstaff.phhp.ufl.edu/services/resourceguide/getstarted.htm)

**Support Services**

**Accommodations for Students with Disabilities**

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office [http://www.dso.ufl.edu](http://www.dso.ufl.edu) within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting [https://disability.ufl.edu/students/get-started/](https://disability.ufl.edu/students/get-started/). It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.
Counseling and Student Health

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: http://www.counseling.ufl.edu. On line and in person assistance is available.

- U Matter We Care website: http://www.umatter.ufl.edu/. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.

- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: https://shcc.ufl.edu/

- Crisis intervention is always available 24/7 from: Alachua County Crisis Center: (352) 264-6789 http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx

- University Police Department: Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).

- UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.
Inclusive Learning Environment

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida’s Non-Discrimination Policy, which reads, “The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans’ Readjustment Assistance Act.” If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu