

**Course title:** PHT 6186C Therapeutic Exercise I **Summer 2023**

**Course description** The goal of this course to provide the student with a basic foundation for selection, modification, and progression of appropriate exercise interventions for individuals who have movement dysfunction due to problems with motor function (e.g. strength, activation, coordination, sensory-motor) Students are expected to develop the skill of effective patient education using previous communication skills, the phases of motor learning, practice, and feedback. Emphasis is placed on understanding normal and impaired movement through discussion of task analysis and normal motor control. The International Classification of Functioning, Disability and Health (ICF), the systems model of motor control and the task-oriented approach to movement analysis will be used as frameworks for evaluating **simple (non-complex)** movement dysfunction and for developing progressive intervention plans.

**Course prerequisites:** Course participation is limited to entry-level DPT students in their first year of the UF Doctor of Physical Therapy program.

**Credit hours:** 2 credits

**Course instructor(s):** Michael Hodges PT, DPT, MHS, OCS [mhodes@phhp.ufl.edu](mailto:mhodes@phhp.ufl.edu)  
 Adjunct Clinical Faculty: Brian C. Lancaster PT, DPT, MS [briancaselancaster@icloud.com](mailto:briancaselancaster@icloud.com)  
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 Pratiksha Awale PT, MS [awalep@phhp.ufl.edu](mailto:awalep@phhp.ufl.edu)

**Clock hours:** (3.25): Lecture/discussion (1.00) Lab (2.25) See summer schedule

**Class time:** Monday Lecture: Asynchronous – Watch prior to lab, answer questions

Monday Lab 1: 8:00 AM-10:15 AM

Lab 2: 11:00 AM-1:15 PM **Note: Labs change order each week.**

**Office hours (Dr. Hodges):** Thursdays 1:30-2:30PM (Office 216 CLC)

**Objectives:** At the conclusion of PHT 6186C the student will be able to

1. **Analyze** normal movement (in task). Determine range, muscle length, muscle activation/strength, control required. **Analyze** abnormal movement. Identify impairments and motor control problems.
2. Define/describe normal motor control, skilled movement, and motor learning/parameters. Use each of these to describe movement control problems and to design interventions.
3. Define prescriptive therapeutic exercise program and functional re-training.
4. For a given case and details (to include health condition, age, level/length of disability, stage of recovery, level of tissue healing, psychological consideration, patient goals, social history, general health, exercise history, environmental and personal information):
  - a. **Using the ICF model:** Identify all the impairments that may be contributing to functional limitations and participation restrictions. Be able to explain.
  - b. **Prioritize the top three impairments contributing to the greatest movement dysfunction.**
5. **Select** appropriate exercises to address identified impairments: Increase length/ROM, muscle activation, strength, endurance, coordination, postural control (balance) and walking quality/speed/adaptability. **Explain and justify selection. Perform. Demonstrate. Teach.** Specific exercise selections may include:
  - a. Stretching: Inhibitive Techniques (hold/relax), Manual Stretch, Self-stretch
  - b. Range of Motion: Passive, Active-Assisted, Active
  - c. Resistance: Manual, Weights, Resistance bands, Machines
  - d. Type of exercise: isometric, isotonic (concentric/eccentric), isokinetic (will not practice this due to need for specialized equipment)

- e. Straight plane, multiplanar, PNF diagonals
  - f. Facilitation (recruitment) techniques
  - g. Closed kinetic chain (CKC), Open kinetic chain (OKC), combined CKC/OKC
  - h. Stability, mobility, co-contractions
  - i. Core stability/strength retraining and progression
  - j. Postural control (balance) retraining
  - k. Functional movement retraining with facilitation
  - l. Gait retraining
  - m. Aquatics
  - n. Relaxation training
  - o. Alternative selections: Yoga, Pilates, Taichi,
6. **Compare exercises** for the same impairment(s). **Determine** advantages of each for various patients and various stages of recovery and tissue healing.
  7. **Design and create** an appropriate exercise program given a case study with basic history and objective measures, deficits, impairments, and functional status. Provide at least two alternative exercises that are equally effective. Provide two exercises that are less challenging (regression) and two that are the next level of progression towards STG/LTG (function)
    - a. e.g., Shoulder flexion 0-90. 1) Sit in chair/pelvis and trunk stable. 2). Stand against the wall. 3) Sit on stability ball (challenging the trunk) 4) Stand with PNF pattern across trunk, no wall support. 5) Change resistance. (Simple to complex)
  8. **Select practice parameters** based on case study details. Explain, justify. **Integrate** knowledge and skills from prior coursework (BSI, BSII, Exercise Physiology, and Exam/Eval)
  9. **Demonstrate the skill of effective and efficient teaching** with out of task and in task exercise. Use the individual characteristics of the patient, characteristics of the learner at each stage of motor learning, and the VITAL sequence: (Include demonstration, plain language, guided movement, motivation, attention, positive feedback, instill confidence, practice parameters) **Modify** teaching skills based on instructor feedback.
  10. Demonstrate competence and confidence explaining rationale for exercise, relationship of exercise to function and correcting patient performance with verbal, tactile, and guiding cues.
  11. **Demonstrate appropriate response** to patient performance with exercise and functional re-training. Instill rapport and confidence.
  12. **Re-evaluate/modify/progress** exercise program of a patient within session and return/follow-up sessions.
    - a. Modify as appropriate
    - b. Demonstration of previously prescribed HEP
    - c. Progress or regress as appropriate
  13. **Facilitate** patient, family, and/or caregiver understanding of the problem, relationship to goals, and how physical therapy may intervene. This enhances motivation. **Demonstrates shared decision making and therapeutic alliance between patient and physical therapist.**
  14. **Further develop** a comprehensive examination/intervention for a selected patient with specific movement problems (coordination, balance, trunk and core control, limb control/fractionated movement) inclusive of standardized assessments. Conduct assessments with accuracy, document, develop LTG/STG and a starting plan of intervention with sound rationale. Plan patient progression (see case studies). Use planned progression to analyze and select appropriate intervention(s).
  15. **Accurately document** movement analysis as part of identification of impairments, plan of care and specific intervention plan, patient response to single episode of care, patient education/instruction, and modification/progression of program, as necessary. Be able to construct effective home

exercise programs (HEP) with pictures/explanations. Be aware of options for non-English speaking patients.

**Instructional Methods:** Blended learning, lecture, online educational experiences, demonstration, role play, explanation, discussion, authentic cases, return demonstration, practice, and modification  
Blended Learning (e.g., video analysis, evidence analysis, role model, practice, case studies)

*What is blended learning and why is it important?*

A “blending learning” class uses a mixture of technology and face-to-face instruction to help you maximize your learning. Knowledge content that would have traditionally been presented during a live class lecture is instead provided online before the live class takes place. This allows face-to-face teaching to focus on course activities designed to help you strengthen higher order thinking skills such as critical thinking, problem solving, and collaboration. Competency in these skills is critical for today’s health professionals.

*What is expected of you?*

You are expected to actively engage in the course throughout the semester. Class discussions and active exercise teaching sessions will be held using Zoom and require high speed internet connection, video, and audio capability. Assignments will require technology for video exercise demonstrations. All students will need to use their UF email to login to zoom sessions and monitor the Canvas site for updates regularly.

Students will work in pairs when practicing exercise and teaching skills. Small group sessions will be organized to allow more interaction and all students will need to be prepared to present or contribute at every session

**Required Textbooks/Materials:**

**Please use Canvas as a guide for materials to read each week**

- O’Sullivan and Schmitz: *Improving Functional Outcomes in Physical Rehabilitation*, 2011
- Dunleavy and Slowick: *Therapeutic Exercise Prescription*, 2019
- Course Web Page: Canvas and attached resources (e.g., case videos)

Materials required:

- Laptop **with camera** (for lecture/lab, practicals, exams, in class assignments)
- Proper attire for lab (T shirts, sports bra/camisole, loose waist short/mid-thigh length)
- Clinic attire guest lectures and practicals (if noted)

Class preparation/Instructor expectations:

- Lab attendance mandatory – (students are allowed one unexcused “miss”) Must **notify instructor of planned “miss.”**
- Students come to the lab prepared with all materials/equipment.
- **Lab time is an opportunity to perfect your skills and get feedback from faculty – please use this time wisely. If you finish practicing skills before the class moves forward with the next skill, review previously covered skills.**
- Students utilize feedback to progress with professional abilities.

**ASSIGNMENTS & GRADING:** (see grading scale current student handbook online)

1 video submission/3 case assignments	10% grade (2.5 each)
In class assignments	P/F (see below)
Student presentation (aquatics) =	10% of grade (group)
Practicals (2) and documentation 10 % each	20% of grade ( <b>Passing score is 90%</b> ) *
2 written exams 30% each	60% of grade
	100%

\* Please see Student Handbook if failed practical

Lab attendance --Required

In class assignments – students will occasionally complete in-class assignments that will be individual or group.

Grading is P/F.

**Grading Scale:**

93-100 = A	4.00 grade point
90-92 = A-	3.67 grade point
87-89 = B+	3.33 grade point
83-86 = B	3.00 grade point
80-82 = B-	2.67 grade point
79-70 = C	2.00 grade point
69-60 = D	1.00 grade point
Below 60 = E	0 grade point

**Test Scores** will be posted within one week of the exam. Every effort will be made to return exams in a timely manner for your review. Your patience is appreciated. Students receiving a "C" (less than "80") or less must meet with the instructor. A time will be scheduled for all class members to review the exam with the answer key. After exams have been returned, grades will not be changed once a week has elapsed. Students wishing to discuss exam questions should schedule *individual* appointments. Students are responsible for checking with the instructor to ensure that the grade is recorded properly if the grade has been changed.

**Dress Code:** Professional T-shirts and shorts are appropriate attire for lab, although some exercise interventions, (e.g., PNF) will require the use of a sports bra for female students. Lecture attire per Student Handbook.

**Professional Behavior:** Effective professional behavior is critical for a successful transition from the classroom to the clinical setting. The faculty recognizes the importance of these behaviors and has incorporated their development and evaluation into each academic course. To demonstrate safe and effective professional behavior prior to clinical visits that occur in the third semester of the curriculum, all students must attain "beginner level" as demonstrated by behaviors in the classroom and lab by the end of the second semester in the curriculum. Students will formally self-evaluate their professionalism at midterm and end of second semester. Additional feedback will be provided by peers, instructors, and teaching assistants. Additionally, students must demonstrate 100% safety on all practical exams throughout the curriculum. Should a student fail a practical exam, due to safety or additional reasons, they will have only one opportunity to repeat the exam. Students must maintain entry-level professionalism throughout the remainder of the academic and clinical curriculum. Failure to do so will prevent the student from advancing in the curriculum.

**Academic Honesty:**

In this professional program, we are particularly sensitive to students submitting independent work and to complete and accurate referencing in complying with the University of Florida Rules - 6CI-4.017 Student Affairs: Academic Honesty Guidelines. Further details regarding the University of Florida honesty policy are available at: [www.aa.ufl.edu/aa/Rules/4017.htm](http://www.aa.ufl.edu/aa/Rules/4017.htm)

All students are required to abide by the Academic Honesty Guidelines, the following pledge has been accepted by the University and is expected of all students:

"I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action, up to and including expulsion from the University."

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by UF students, the following pledge is either required or implied:

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

**Accommodations for students with disabilities:** Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of the Students' Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation.

### ***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 various 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>. Online 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 on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is 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 with 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](http://www.multicultural.ufl.edu)

## PHT 6186C Ther Ex I (2023) Schedule

Week Rm HPNP 1104/1109	<b>Topic</b> Lecture: <b>Asynchronous – posted the week prior to lab</b> Lab: Synchronous, participation *Labs alternate weekly 1 <sup>st</sup> lab 8:00-10:15 2 <sup>nd</sup> lab 11:00-1:15	<b>Readings/Assignments/Prep work</b> Two textbooks: 1. Improving Functional Outcomes in PT (this will be used in Neuro I as well) 2. <a href="#">Therapeutic Exercise Prescription - Please bring this textbook to lab</a>
Week 1 May 15 Alternate lab each week B → A	Lecture: Concepts/Frameworks: Movement Analysis and Motor Control Teaching, Coaching, Motivation.  Lab: Movement analysis. Case study review (impairments and exercise intervention)	Improving Functional Outcomes in PT Chapters 1 and 2 (pages 12-25-up to PNF)  <a href="#">Therapeutic Exercise Prescription Chapters 1 and 3</a>
Week 2 May 22 A→B	Lecture: Motor learning/Precautions and Contraindications  Lab: Joints: Ankle	Improving Functional Outcomes in PT Chapters 1 and 2 (pages 12-25 – up to PNF)  <a href="#">Therapeutic Exercise Prescription Chapter 9: All exercises pertaining to Ankle (refer to exercise Excel sheet on Canvas)</a>  <b>Assignment 1 opens at 5PM (May 22<sup>nd</sup>)</b>
Week 3 May 29 <b>Holiday</b> B → A	Lecture: Introduction to PNF (muscle activation)  <b>Make up lab: HPNP 1104/1109 Thursday June 1st Lab B→A 8:00-9:45/10:00-11:45</b>  Lab: Joints: Knee	Improving Functional Outcomes in PT Chapter 2 PNF (pages 25-36) Important for Board Examination  <a href="#">Therapeutic Exercise Prescription Chapter 9: All exercises pertaining to Knee (Refer to exercise Excel sheet on Canvas)</a>  <b>Assignment 1 (Teaching Video) Due Thursday 6/1 11:59pm</b>
Week 4 June 5 A→B	Lecture: Strengthen, initial dosage, progression See Tables 5.4, 5.5, 5.6, 5.7, 5.8 (Therapeutic Exercise Prescription)  Lab: Joints: Hip	Improving Functional Outcomes in PT Chapter 3: Bed mobility and early trunk control  <a href="#">Therapeutic Exercise Prescription Chapter 9: All exercises pertaining to Hip (refer to exercise Excel sheet on Canvas)</a>  <b>Assignment 2 opens at 5PM (June 5<sup>th</sup>)</b>
Week 5 June 12 B→A	<b>Practical I – Monday, June 12<sup>th</sup></b> <b>8:00 AM -12:15 PM HPNP 1104/1109</b> <b>Thursday June 15<sup>th</sup> 8:00 AM -12:00 PM (if needed)</b>  <b>Exam I – Monday, June 12<sup>th</sup></b> <b>1:15 PM -2:30 PM HPNP 1104/1109</b>	<b>Assignment 2 (Lower Quarter Case) Due Thursday 6/15 11:59 pm</b>
Week 6 June 19 <b>Holiday</b> A→B	<b>Make up lab: HPNP 1104/1109 Thursday, June 22<sup>nd</sup> Lab B→A 8:00-9:45/10:00-11:45</b> Lecture: Core presentation (Dr. Jason Beneciuk)	Improving Functional Outcomes in PT Chapter 5: Kneeling and half-kneeling

	Lab: Joints: Trunk (thoracic and lumbar spine)	Therapeutic Exercise Prescription Chapter 11: Spine Workbook-All exercises relating to Thoracic and Lumbar Spine (Refer to exercise Excel sheet on Canvas)  <b>Assignment 3 opens at 5PM (6/19)</b>
Week 7 June 26 B→A	Lecture: Trunk (sit to stand)/Balance  Lab: Joints: Trunk (thoracic and lumbar spine)	Improving Functional Outcomes in PT Chapter 6: Transfers (pages 138-150) Chapter 7: Exercise for postural control and standing balance (Review/Skim)  Chapter 11: Spine Workbook – All exercises relating to Thoracic and Lumbar Spine (Refer to exercise Excel sheet on Canvas)  <b>Assignment 3 (Trunk/Spine Case) Due Thursday 6/29 11:59 pm</b>
Week 8 July 3 A→B	<b>NOTE: Monday, July 3<sup>rd</sup> is not an official UF holiday (Tuesday, July 4<sup>th</sup> is an official UF holiday). Moving the lab from Monday, July 3<sup>rd</sup> to Thursday, July 6<sup>th</sup> is being considered. Stay tuned.</b>  Lecture: PNF and upper quarter  Lab: Upper quarter PNF starts. Cervical, scapula, shoulder	Therapeutic Exercise Prescription Chapter 10: All exercises related to Shoulder, Scapula Chapter 11: All exercises related to Cervical Spine (Refer to exercise Excel sheet on Canvas)
Week 9 July 10 B→A	Lecture: PNF Pelvis and scapular patterns  Lab: Joints: Cervical, scapula, shoulder (continued)	Therapeutic Exercise Prescription Chapter 10/11 (continued from week 8) (Refer to exercise Excel sheet on Canvas)  <b>Assignment 4 opens at 5PM (7/10)</b>
Week 10 July 17 A→B	No Lecture This Week: <b>8:00-9:15 Aquatics group presentations</b>  Lab: Finish shoulder/scapula. Begin elbow/wrist. PNF continued  <b>Tentative schedule: Aquatics experience (UF Health Orthopedics and Sports Medicine Institute. 3450 Hull Road) Monday, July 17<sup>th</sup>-Wednesday, July 19<sup>th</sup> 5PM-7PM</b>	<b>Aquatics slides to Femi: Sunday 7/16 8:00am</b>  Therapeutic Exercise Prescription Chapter 10: All exercises related to Elbow and Wrist (Refer to exercise Excel sheet on Canvas)  <b>Assignment 4 (Upper Quarter Case) Due Thursday 7/20 11:59 pm</b>
Week 11 July 24 B→A	Lecture: Relaxation techniques and resources  Lab: Elbow/wrist/hand	
Week 12 July 31 A→B	<b>Exam II – Monday July 31st 1:15 PM -2:30 PM HPNP 1104/1109</b>  <b>Practical II – Monday July, 31st 8:00 AM-12:15 PM HPNP 1104/1109</b> <b>Early option (if needed): Thursday, July 27<sup>th</sup> 8:00 AM-12:00 PM</b>	

