

PT 612 Movement System Examination & Evaluation II (3 cr)

Course Description: Integration of examination and evaluation techniques for diagnosis and prognosis of impairments and activity limitations of the human movement system. Emphasis is given to musculoskeletal and neurological examination and evaluation components.

Faculty: Steven Halcrow, PT, DPT; Cindy Flom-Meland, PT, PhD; Schawnn Decker, PT, DPT; Michelle LaBrecque PT, DPT;; Ricky Morgan, PT, DPT; Brittany Johnson, PT, DPT; Meridee Danks, PT, DPT

Credit Hours: 3 credits

Clock Hours: Tuesday/Thursday; 9:30am-12:30pm

Course Prerequisites:

Registered in the Professional Physical Therapy curriculum

Course Objectives:

Following the completion of this course the student will:

1. Understand principles and concepts related to orthopedic assessment, including the detailed patient history, observation, AROM, PROM, resisted isometrics, functional assessments, peripheral joint scan, myotomes, dermatomes special tests, reflexes and cutaneous distribution, joint play movement, palpation, and roentgenograms. (7A, 7D10, 7D17, 7D18, 7D19g, 7D19k, 7D19m, 7D19o, 7D19q, 7D19s, 7D19t, 7D19u, 7D19v; Cognitive Domain-Comprehension)
2. Develop basic assessment skills and perform selected assessments to the following areas: (7D10, 7D18; Cognitive Domain-Application; Cognitive Domain-Adaptation)
 - a. Cervical spine
 - b. TMJ
 - c. Shoulder
 - d. Elbow, wrist and hand
 - e. Thoracic spine
 - f. Body mechanics
3. Upon completion of the assessment, be able to identify significant signs and symptoms, determine probable causes of the signs and symptoms, demonstrate clinical decision-making skill, and plan for appropriate physical therapy intervention or referral to other health care professionals. (7B, 7D10, 7D16, 7D18, 7D20, 7D24; Cognitive Domain-Comprehension)
4. Develop basic assessment and clinical decision-making skills. (7B, 7D10, 7D18, 7D20; Psychomotor Domain-Adaptation)
5. Document the findings of the examination and plans for intervention in SOAP format, using evidence based articles to support findings. (7D11, 7D22, 7D31, 7D32; Cognitive Domain-Synthesis)
6. Demonstrate professional behavior and communication skills in all aspects of PT practice including interaction and teaching with patients, family, peers and health care professionals, and understand the implications of individual and cultural differences. (7D5, 7D7, 7D24; Affective Domain-Responding)

7. Demonstrate proper body mechanics principles and give the theory behind the need for proper body mechanics. (7D5, 7D27d; Psychomotor Domain-Complex Overt Response)

8. Correctly perform and interpret the vital sign measurements of heart rate, respiratory rate, blood pressure and pulse oximetry relative to resting and physical activity, health status, and safety. (7D18, 7D19a, 7D19e, 7D19w, 7D20; Psychomotor Domain-Application; Cognitive Domain-Analysis)

9. Analyze posture. (7D19r, 7D34; Cognitive Domain-Analysis)

10. Explain the relationship of the center of gravity of the human body to all body segments (7D19r, 7D34; Cognitive Domain-Comprehension)

11. Recognize the importance of the position the pelvis assumes with various activities and its effect on posture. (7D19r, 7D34; Affective Domain-Receiving)

12. Discriminate between different posture types. (7D19r, 7D34; Affective Domain-Organization)

13. Identify asymmetry of body parts and determine the significance of such. (7D19r, 7D34; Cognitive Domain-Comprehension)

14. Be able to implement appropriate postural correction procedures. (7D19r, 7D34; Cognitive Domain-Synthesis)

15. Examine muscle strength using manual muscle testing and determine the appropriate muscle grade including: (7D19o)

- a. Define manual muscle testing, and discuss the purposes of manual muscle testing.
- b. Discuss the reliability and validity of manual muscle testing.
- c. Define and describe the muscle strength grading system.
- d. Perform manual muscle testing for a given muscle or muscle group, demonstrating proper positioning, patient instruction, and palpation of the muscles being tested.
- e. Determine the appropriate muscle strength grade based on the performance of the patient.
- f. Identify substitution patterns common to individual muscle tests.
- g. Examine a simulated patient to evaluate muscle strength and analyze the potential for specific etiologies assigned (nerve root versus peripheral nerve injury, muscle injury versus neurological injury, etc.)

16. Examine joint range of motion using goniometric measurements and determine the available ROM including: (7D19s)

- a. Demonstrate the correct technique of joint range of motion measurement for all joints of the extremities including proper positioning and instruction, correct alignment of the goniometer and correct reading of the goniometer.
- b. Examine the presence of normal and abnormal range of motion in a given subject, and record the findings using proper nomenclature.
- c. State the normal range of motion for each joint
- d. Discuss the purpose, clinical uses, and the reliability of goniometric measurements.

17. Palpate and identify anatomical landmarks and structures. (7D19b)

- a. Identify and palpate bony landmarks and superficial muscles of each body region.

- b. Identify and palpate (where possible) major joint structures including ligaments and bursae.
- c. Identify the location of, and palpate (where possible) major nerves and blood vessels.
- d. Apply the anatomical landmarks to manual muscle testing and goniometry
- e. Apply the anatomical landmarks to musculoskeletal examination procedures.

18. Examine adult clients for basic motor control impairments and functional deficits. (7D17, 7D19g, 7D19n, 7D19p, 7D19t, 7D19u; Affective Domain-Responding)

19. Contrast Traditional Models and Task-oriented Model of Neurological Assessment. (Cognitive Domain-Comprehension,Analysis)

20. Identify the purposes and components of the examination of motor function, including but not limited to the following impairments:

- a. Muscle weakness
- b. Abnormal tone/reflexes
- c. Sensory and perceptual dysfunction
- d. Incoordination
- e. Balance dysfunction.

21. Analyze use of standardized scales for functional assessment. (7D31, 7D34; Cognitive Domain - Analysis)

22. Apply evaluation screening skills (posture, balance, etc.) that have been learned into “real-life” situations (i.e., lab practical’s, community health fairs, etc) under supervision of instructors.* (7D5, 7D38; Cognitive-Application)

WEIGHTED GRADING:

Assignments – 5% (Bb quizzes, in-class assignments, out of class assignments)

Quiz #1 – 4%

Quiz #2 – 4%

Quiz #3 – 4%

Quiz #4 – 4%

Quiz #5 - 4%

Check Off #1 – 1.25%

Check Off #2 – 1.25%

Check Off #3 – 1.25%

Check Off #4 – 1.25%

Written Exam #1 – 15%

Written Exam #2 – 20%

Practical Exam #1 – 15%

Practical Exam #2 – 20%

COURSE GRADE:

90-100% = A

80-89.99% = B

76-79.99% = C

Below 76% = Unsatisfactory

Minimum passing score on practical = 80%

WRITTEN EXAMS:

Written examinations will require a 76% or above to avoid remediation. Remediation will include discussion with a faculty member and **WILL INCLUDE** a re-take of the examination at the discretion of faculty. **The first attempt will be used for all grading purposes.**

LAB PRACTICAL EXAMS:

The student must receive a passing grade (80%) on ALL laboratory practical examinations in order to successfully complete this course. A failed lab practical examination must be repeated and a passing grade received; however **the grade received on the first attempt will be used for all grading purposes.** If the student fails the retake lab practical examination, procedures from the Scholastics Standards document will be initiated.

CHECK-OFF:

The student must receive a satisfactory score on each check-off. If a student does not meet satisfactory requirements, remediation must be completed with a faculty member.

ATTENDANCE:

Attendance is required for all lectures and labs. If you are aware of an upcoming absence, you must provide a written notification (email) to Steven (steven.halcrow@und.edu), prior to absence. Missed material will be your responsibility to make up. Excessive absences may have a negative impact on your final grade. Follow PT guidelines for contacting department with acute illness or injury. If problems occur, students are required to work through channels of communication to resolve the problem before going to the chair or dean. The channel is student, instructor, chair, dean.

BLACKBOARD

Information in regard to PT 612 will be made available on Blackboard.

REQUIRED TEXTBOOK:

Magee D., Manske R. *Orthopedic Physical Assessment* (7th Ed)

Cram Session in Goniometry and Manual Muscle Testing (Latest edition)

REFERENCE MATERIAL

Dutton M. – “Orthopaedic Examination, Evaluation, & Intervention”

O’Sullivan SB, Schmitz TJ. – “Rehabilitation: Assessment and Treatment”

McNerney T, McGlynn E. – “Reliable Orthopedic Outcome Measures” (ROOM)

Gulick D. – “Ortho Notes” (Clinical Examination Pocket Guide)

Biel - “Trail Guide to the Body” (B) (Latest Ed)

OTHER OPPORTUNITIES

The Department of Physical Therapy has multiple opportunities for students to participate in clinical practice activities under the supervision of UND faculty, all of whom are licensed physical therapists. During this particular course, you may be required to participate in the examination, evaluation, and physical therapy interventions of community members. You will be providing primary care to individuals with impairments and/or dysfunction during laboratory classes, community health fairs, pro bono clinics, and/or within traditional clinical practices.

Notice of Nondiscrimination

It is the policy of the University of North Dakota that no person shall be discriminated against because of race, religion, age, color, gender, disability, national origin, creed, sexual orientation, gender identity, genetic information, marital status, veteran's status, or political belief or affiliation and the equal opportunity and access to facilities shall be available to all. Concerns regarding Title IX, Title VI, Title VII, ADA, and Section 504 may be addressed to Donna Smith, Director of Equal Employment Opportunity/Affirmative Action and Title IX Coordinator, 401 Twamley Hall, 701.777.4171, und.affirmativeactionoffice@UND.edu or the Office for Civil Rights, U.S. Dept. of Education, 500 West Madison, Suite 1475, Chicago, IL 60611 or any other federal agency.

Disability Access Statement

Contact Steven Halcrow at steven.halcrow@med.und.edu or 701-777-3857 to request disability accommodations, discuss medical information, or plan for an [emergency evacuation](#).

To get confidential guidance and support for disability accommodation requests, students are expected to register with DSS at UND.edu/disability-services 180 McCannel Hall, or 701.777.3425.

Reporting Sexual Violence

If you or a friend has experienced sexual violence, such as sexual assault, domestic violence, dating violence or stalking, or sex-based harassment, please contact UND's Title IX Coordinator, Donna Smith, for assistance: 701.777.4171; donna.smith@UND.edu or go to UND.edu/affirmative-action/title-ix.

Faculty Reporting Obligations Regarding Sexual Violence

It is important for students to understand that faculty are required to share with UND's Title IX Coordinator any incidents of sexual violence they become aware of, even if those incidents occurred in the past or are disclosed as part of a class assignment. This does not mean an investigation will occur if the student does not want that, but it does allow UND to provide resources to help the student continue to be successful at UND. If you have been the victim of sexual violence, you can find information about confidential support services at UND.edu/affirmative-action/title-ix.

Ensure Accessibility

To comply with the latest accessibility guidelines, documents posted online, including, but not limited to, Adobe PDF files, Microsoft Word documents, Microsoft PowerPoint presentations, and online flipbooks, must be screen-reader friendly.

For directions on how to make your syllabus and other course materials accessible, go to Blackboard > Services > Atomic Learning > Creating an Accessible Syllabus (for technical assistance with Atomic Learning, contact UND Tech Support at UND.edu/tech-support).

COVID-19 Statement

UND is committed to maintaining a safe learning environment while providing quality learning experiences for our students. COVID-19's continued presence within our UND community may necessitate changes in classroom management as the academic year progresses. As such, UND asks students and instructors to be flexible when necessary to promote a safe environment for learning. Please do not attend an in-person class or lab if you are feeling ill, particularly if you are experiencing symptoms of COVID-19, or if you have been directed by health professionals to quarantine or isolate. If you are not able to attend class or lab, please notify your instructor as soon as possible and discuss options for making up any missed work in order to ensure your ability to succeed in the course. If you will have an extended absence due to serious illness or other uncontrollable circumstances, you may request an absence notification through the [Office of Student Rights and Responsibilities](#). Similarly, if your instructor is ill they may need to cancel class or temporarily move your course to online delivery to ensure that you are able to complete the course successfully. Instructors may require students to wear masks in the classroom or in the laboratory as a preventative measure designed to facilitate uninterrupted classroom engagement and to facilitate health and safety in the classroom. If your instructor does require masks in class or in a laboratory, you are expected to comply with that request.

UND also strongly encourages all members of the University community, including students, to get vaccinated, seek out testing when needed, and model positive behavior both on- and off-campus to foster a healthy and safe learning environment for all students. Individuals who would like to discuss disability accommodations regarding masks should contact the Disability Services for Students (DSS) office at 701-777-2664 or UND.dss@UND.edu. Individuals who are unable to wear a mask due to a sincerely held religious belief should contact the UND Equal Opportunity and Title IX Office at 701.777.4171 or UND.EO.TitleIX@UND.edu.

*Syllabus and Schedule subject to change.

Week	Date	Lead Faculty	Assist Faculty	Topic
1	Jan 10	Gary		Anatomy Lecture 9:30am-12:30pm
	Jan 12	Gary		Anatomy Lecture: 9:30am-12:30pm
2	Jan 17	Steve	Schawnn Michelle	Cervical/Thoracic
	Jan 19	Steve	Schawnn Michelle	Cervical/Thoracic
3	Jan 24	All		Check Off #1 – Cervical Quiz #1 - Cervical

	Jan 26	Steve/ Resident		Shoulder
4	Jan 31	Steve	Schawnn Michelle	Shoulder
	Feb 2	Steve	Schawnn Michelle	Shoulder
5	Feb 7	Steve		Check Off #2 – Shoulder Quiz #2 - Shoulder
	Feb 9	Ricky	Schawnn Steve	Elbow/Wrist
6	Feb 14	Ricky	Schawnn Steve	Elbow/Wrist
	Feb 16	All		Check Off #3 – Elbow/Wrist Quiz #3 – Elbow/Wrist
7	Feb 21	Ricky	Michelle Schawnn	Shoulder/Elbow/Wrist Case Application
	Feb 23	Ricky		CSM: Recorded Hand Lecture Biomechanics/Exam and Eval
8	Feb 28	Ricky	All	Hand Lab/Review Lab
	Mar 2	Steve	All	Review Lab
9	Mar 7	All		Midterm Exam Week (Written Exam #1, Practical Exam #1)
	Mar 9	All		Midterm Exam Week (Written Exam #1, Practical Exam #1)
10	Mar 14			Spring Break
	Mar 16			Spring Break
11	Mar 21	Emily	Schawnn Steve Michelle	Soft Tissue Lecture/Integumentary Exam
	Mar 23	Emily	Schawnn Steve Michelle	Soft Tissue Lecture/Integumentary Exam
12	Mar 28	Emily	Schawnn Steve	Soft Tissue Lecture/Integumentary Exam

			Michelle	
	Mar 30	Emily	Schawnn Steve Michelle	Quiz #4 - Soft Tissue/Integumentary
13	Apr 4	All		Check Off #4 - Integumentary/Massage (Combined with PT 616)
	Apr 6	Meridee	Michelle Cindy Amanda	Motor Learning Clinical Decision Making
14	Apr 11	Meridee	Michelle Cindy Amanda	Assessment of Neurological Pathologies/Balance
	Apr 13	Meridee	Michelle Cindy Amanda	Assessment of Neurological Pathologies/Balance
15	Apr 18	Meridee	Michelle Cindy Amanda	Gait
	Apr 20	Meridee	Michelle Cindy Amanda	Gait
16	Apr 25	Meridee	Michelle Cindy Amanda	Quiz #5 Pathological Gait
	Apr 27	Meridee	Michelle Cindy Amanda	Pathological Gait
17	May 2	Steve		TMJ
	May 4	Steve		Review for Finals
18				Finals (Written Exam #2, Practical Exam #2)