

2022 - PT 409: CLINICAL PATHOLOGY I

DESCRIPTION: Selected pathological conditions affecting the musculoskeletal system. Associated orthopaedic diagnoses, surgical interventions, the influences of comorbidities and pharmaceutical interventions, and safety concerns are discussed with an application to physical therapy patient/client management during orthopaedic rehabilitation. Application/Laboratory Activities.

DEPARTMENT OF PHYSICAL THERAPY

INSTRUCTORS: Rachel Bothun PT, DPT (course coordinator); Dave Relling PT, PhD; Mark Romanick PT, PhD, ATC

CREDIT HOURS: Three (3) credit hours

CLOCK HOURS: Lecture/Readiness Tests: Mondays: 3 - 6 pm; Wednesdays 3 – 5 pm; Rm W202

COURSE GOALS AND OBJECTIVES (global):

Course Goals: Goals and expectations of the course are that the students will be able to:

- (a) **Define** the foundational science and clinical science knowledge regarding specific pathologies and conditions affecting the musculoskeletal system. (Bloom's Taxonomy: Cognitive/Knowledge)
- (b) **Describe** the role of physical therapy in the medical management of patient care when affected by such pathologies or conditions requiring orthopedic surgical interventions. (Bloom's Taxonomy: Cognitive/Comprehension)
- (c) **Demonstrate** team-building in healthcare for patients with such conditions or who are recovering from surgical interventions for specific conditions. (Bloom's Taxonomy: Cognitive/Application)
- (d) **Teach** others about the specific pathologies and conditions and the potential influence on patients' functional abilities. (Bloom's Taxonomy: Cognitive/Application)
- (e) **Apply** the principles of legal standards and use behaviors consistent with the APTA Code of Ethics for the Physical Therapist during interactions with peers and team members and in the development of patient-scenario based care plans. (Bloom's Taxonomy: Cognitive/Application)

COURSE OBJECTIVES (specific):

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

1. **Explain** the etiology, pathophysiology, signs and symptoms of prevalent, selected disorders affecting the musculoskeletal system and the CNS. (Bloom's Taxonomy: Cognitive/Comprehension)
2. **Describe** prioritized aspects of medical management of patients with (Bloom's Taxonomy: Cognitive/Comprehension):
 - Metabolic Disorders
 - Infective disorders
 - Arthritic conditions
 - Skeletal, joint, and muscle disorders
 - Soft tissue injuries
 - Genetic and developmental disorders affecting the neuromusculoskeletal System
 - Common orthopedic surgical conditions
 - Peripheral nerve pathologies
 - Joint replacement surgical interventions (Knee, Hip, Shoulder, Wrist & Hand)
 - CNS infection

Cerebrovascular accident
Spinal cord injuries
Traumatic brain injuries
Other CNS diseases

3. **Integrate** material from this course with other courses taken during the professional program to develop patient intervention and care plans. (Bloom's Taxonomy: Cognitive/Synthesis)
4. **Identify** risk factors associated with selected musculoskeletal disorders, orthopedic interventions, and developmental musculoskeletal conditions; and the ability to educate clients/patients, family members and interdisciplinary team. (Bloom's Taxonomy: Cognitive/Comprehension)

COURSE PREREQUISITES:

Registered in Professional Physical Therapy curriculum.

REQUIRED READING:

Textbooks:

Goodman, CG; Fuller, KS. Pathology: Implications for the Physical Therapist, 5th edition
Giangarra CE; Brotzman SB, Manske, RC. Clinical Orthopaedic Rehabilitation, 4th edition. Also available as Kindle book on Amazon.

TEACHING METHODS AND CURRICULUM PRACTICE MODEL: Teaching methods in this course include lecture, case scenario, and Team-Based Learning pedagogy. Students will be required to demonstrate competency in course content through quizzes, application activities, and written examinations. The above objectives contribute to the Practice Model Components of Foundational Science; Clinical Science, Professional Practice, Patient/Client Practice and Management.

METHODS FOR EVALUATION:

Readiness Assessment following the completion of the Guided Learning Outline prior to class:

Individual Readiness Assurance Tests (IRAT) are used to evaluate student preclass preparation and content knowledge.

Team Readiness Assurance Tests (TRAT) are used to evaluate the team's foundational content knowledge and preparedness for the application activities

Team application activities and graded assignments are used to evaluate the application of course concepts and clinical decision making.

Written Midterm & Final Examinations

OUTLINE OF CONTENT AND REQUIRED/RECOMMENDED READINGS:

See attached course content schedule. Tuesdays are generally days of lecture; Thursdays are generally days of assessment, lecture, and application. Assigned reading will be posted in Blackboard.

EXAMINATIONS:

Students are expected to pass written examinations and graded application assignments. In accordance with the UND-PT Scholastic Standards, a passing cumulative score (IRATs, TRATs, Applications, and Midterm/Final Written Exam scores) of 76% must be achieved to pass the course. A 76% score is passing for each of the 2 written exams (midterm/final)--remediation is required for a written midterm/final exam score below 76%.

Course grade will be calculated with the following distribution: 90-100 = A; 80 – 89.9 = B; 76 – 79.9 = C; less than

76 = Unsatisfactory. See the UND-PT *Scholastic Standards* document for further reference.

ATTENDANCE:

Attendance policy, including notification of absence, is in accordance with that listed in the Scholastic Standards. Individual rescheduling the taking of exams and the submission of assignments is at the discretion of the course coordinator. Students must notify the instructor for any absences (at a minimum by email).

MAKE UP WORK/EXAMINATIONS:

Students may be assigned additional coursework for all absences. Grades for any make-up IRAT/TRAT exams, midterm/final exams, or application activities in the case of an **unexcused absence** will be limited to a maximum of 76%.

FINAL GRADE COMPOSITION:

	<u>Weight</u>
Individual Readiness Assessment Tests (IRATs) – 7-8 IRATs	20%
Team Readiness Assessment Tests (TRATs) - 7-8 TRATs	20%
Application Activities – Thursdays (individual & team contributions)	10%
Midterm and Final written exams	50%

ACADEMIC INTEGRITY:

In accordance with the rules concerning scholastic dishonesty in the *Code of Student Life** at the University of North Dakota, I affirm that I understand these rules and I agree to comply with them.

I will not:

- a) receive any additional information or assistance for any exam other than what was provided during class or approved tutor sessions
- b) copy from another student's test
- c) collaborate with or seek aid from another student who may have previously taken the exam
- d) knowingly use, buy, sell, steal, or solicit in whole or in part the contents of any exam
- e) bribe another person to obtain information about any exam

DISABILITY ACCESS STATEMENT:

Contact me Rachel Bothun: rachel.bothun.2@und.edu 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, www.UND.edu/disability-services. 280 McCannel Hall | 701.777.3425 | 711 for Relay

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, 701.777.4191, 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.

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: 701.777.4191; 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.

UND CARES RESPONSE TEAM: The [UND Cares Response Team](#) is available to assist with incidents involving UND students 24 hours a day, seven days a week. They respond to incidents such as major accidents, missing students, sickness that interferes with attending classes, death, suicidal ideations, situations involving self-harm, psychological trauma and sexual violence. Contact directly at 701.777.2664 during regular business hours OR 701.777.3491 after hours.

For any grievance, students are required to work through channels of communication to resolve the problem before approaching the chair or dean. The channel is student, instructor, chair, associate dean health sciences, and dean. (See more in Scholastic Standards)

Date	PT 409: Clinical Pathology I Topic Outline Mondays: 3 - 6 pm (W202) & Wednesdays: 3 – 5 pm (W202) Please note items in BOLD indicating Guest Lecture by a physician.
Wed 1/12/22	Course Introduction General orthopaedic conditions 1 [soft tissue, joint, metabolic, infective, neoplastic] (Mark) IRAT/TRAT A
Mon 1/17/22	<i>Martin Luther King, Jr Holiday – No Class</i>
Wed 1/19/22	3:00 – 5:30 pm Dr. Johnson – hip pathologies
Mon 1/24/22	IRAT/TRAT 1-Anti-inflammatory/arthritis pharmacology Anti-inflammatory/arthritis pharmacology (Dave)
Wed 1/26/22	General orthopaedic conditions 2 [soft tissue, joint, metabolic, infective, neoplastic] (Mark)
Mon 1/31/22	PT and hip pathologies (Rachel)
Wed 2/2/22	3:00 – 5:00 pm Dr. Schall - Surgical Intervention: Total Knee/Hip Arthroplasties
Mon 2/7/22	Rheumatoid Arthritis (RA) & Osteoarthritis (OA) (Rachel)
Wed 2/9/22	PT 413 2-3 PM
Fri 2/11/22	Tentatively 1:30 – 3:30 pm – Dr. Gardner – robotic direct anterior THA
Mon 2/14/22	IRAT/TRAT 2-OA/RA PT and total joint arthroplasties (Rachel)
Wed 2/16/22	3:00 Dr. Johnson – knee pathologies
Mon 2/21/22	<i>Presidents Day Holiday – No Class</i>

Wed 2/23/22	IRAT/TRAT 3-hip and knee PT and knee pathologies (Rachel)
Mon 2/28/22	4:00 – 6:00 pm: Dr. Yashraj Chauhan (pronounced Sha-hän') - Orthopedic Pathology of the Foot and Ankle
Wed 3/2/22	IRAT/TRAT 4-foot/ankle pathologies PT and foot/ankle pathologies (Rachel)
Mon 3/7/22	Midterm written exam
Wed 3/9/22	Spine pathologies; Nerve entrapment and other nerve injuries, CNS infection (Mark)
3/14-18/22	<i>Spring Break</i>
Mon 3/21/22	4-6 pm Spine pathologies; Nerve entrapment and other nerve injuries, CNS infection (Mark)
Wed 3/23/22	3:00 pm Dr. Johnson shoulder pathologies
Mon 3/28	4:00 – 6:00 pm Dr. Joffery Thompson: Orthopedic Interventions: Shoulder
Wed 3/30/22	**Tentatively 3:00 – 5:00 p.m Dr. Qin Du-Orthopedic Interventions for the Elbow, Wrist & Hand
Mon 4/4/22	IRAT/TRAT 5-shoulder pathologies PT and shoulder pathologies (Dave)
Wed 4/6/22	3:00 pm Dr. Johnson – elbow, wrist, hand pathologies
Mon 4/11/22	PT and elbow pathologies (Dave)
Wed 4/13/22	IRAT/TRAT 6-wrist/hand PT and wrist/hand pathologies (Dave)
Mon 4/18/22	<i>Easter Holiday – No Class</i>
Wed 4/20/22	3:00 – 3:30 pm: Pre-Reading Assignment: Pediatric Genetic and Developmental Disorders Affecting the Neuromusculoskeletal System 3:30 – 5:00 p.m. –Lecture: Pediatric orthopaedic & neurologic issues – (Mohamed) IRAT/TRAT 7-Pediatric
Mon 4/25/22	Cindy Flom-Meland: Neurologic: TBI and CVA
Wed 4/27/22	Cindy Flom-Meland: Neurologic: SCI and neurodegenerative diseases
TBA	Final Written Exam