

## **PT 608: Pathophysiology for Physical Therapists II (3 cr.)**

### **Course Description:**

This course provides an overview of physiology and pathophysiology of systems for physical therapists. Associated health conditions, surgical interventions, the influences of co-morbidities and pharmaceutical interventions, and safety concerns are discussed with an application to physical therapy patient/client management.

### **Faculty:**

[Kevin O'Brien, PT, DPT, Cert. MDT](#)

**Credit Hours:** 3 credits

**Course Meeting Times:** Monday / Wednesday 1 PM – 3 PM. Room E221 of UND SMHS

**Course Prerequisites:** Registered in the Professional Physical Therapy curriculum.

**Outline of Course Content:** See attached course schedule.

### **Course Objectives:**

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

1. Demonstrate an understanding of the signs and symptoms of selected health conditions and describe how the health conditions may influence the patient or physical therapy intervention planning (Cognitive - Comprehensive) (SRE: 7A, 7C)
2. Apply the course concepts regarding selected health conditions, associated precautions, and intervention recommendations covered in this course to develop an appropriate medical management plan for patients with specific health conditions. (Cognitive – Synthesis) (SRE 7C, 7D10)
3. Demonstrate the ability to analyze the effects of multiple co-morbidities and prioritize intervention needs appropriately. (Cognitive – Analysis) (SRE 7C, 7D10)
4. Demonstrate the ability to evaluate intervention strategies and plans of care and adapt intervention plans for specific health conditions in the development of an individualized plan of care. (Cognitive – Synthesis) (SRE 7C, 7D10, 7D30)
5. Demonstrate an understanding of pharmacological intervention for specific, selected health conditions and modify intervention plan for the effects and precautions associated with selected medications. (Cognitive – Synthesis) (SRE 7A, 7D30)
6. Understand and apply lab values, imaging, and patient conditions for altering intervention.

Conditions addressed in this course include but are not limited to:

- Cardiovascular and cardiopulmonary system disorders
- Integumentary, Connective Tissue, Vascular, and Lymphatic disorders

- Neurodegenerative disorders
- Neuropathology of Spinal Cord Injury
- Developmental Neuropathology
- Cervicothoracic spinal surgery and conditions
- Shoulder, elbow, wrist / hand orthopedic conditions and surgery
- Urogenital / renal pathology
- Critical illness / Acute care myopathy
- Oncologic and Hematologic disorders
- Women's health / Pelvic floor disorders

### Materials – Text, Readings, & Supplementary Readings:

Goodman, CG; Fuller, KS, *Pathology: Implications for the Physical Therapist*, 5<sup>th</sup> edition  
 Giangarra CE, Brotzman, SF; Manske, RC, *Clinical Orthopaedic Rehabilitation*, 4<sup>th</sup> edition

### Teaching Methods and Practice Model:

Teaching methods in this course include lecture, case-based scenarios, and Team-Based Learning pedagogy. Students will be required to demonstrate competency in course content through quizzes, active learning and 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 of Evaluation:

- **Individual Readiness Assurance Tests (IRAT)** are used to evaluate individual student 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. Immediate feedback mechanisms are used with TRATs to reinforce priority content concepts and accuracy of foundational knowledge.
- **Team application activities and graded assignments** are used to evaluate the application of course concepts and clinical decision making as well as collaborative teamwork.
- **Written block examinations (4)** to assess content knowledge, retention, and application.

### Course Weighted Grade Composition:

Individual Readiness Assessment Tests (IRATs)	15%
Team Readiness Assessment Tests (TRATs)	10%
Graded Application Activities and Assignments	15%
Written Examinations	60%

### Final Grading:

Final course grade will be determined as follows:

- 90-100%      A
- 80-89.9%    B
- 76-79.9%    C
- <76%        Unsatisfactory

### Attendance:

Attendance is required for all scheduled class periods. If you are aware of an upcoming absence, you must provide a written notification (email) to the course instructor ([kevin.obrien@UND.edu](mailto:kevin.obrien@UND.edu)), prior to absence. Follow UND-PT *Scholastic Standards* policy for absence due illness or personal / family

emergency. Missed content material or assessments will be your responsibility to make up. The ability to make up an assignment or assessment in the event of an unexcused absence is at the discretion of the course instructor.

### **Course Access & Log in Information**

This course was developed and will be facilitated utilizing Blackboard. To get started with the course, please go to: <http://blackboard.UND.edu> and log in with your NDUS.Identifier (Username and Password). If you do not know your NDUS Identifier or have forgotten your password, please visit [Your NDUS Account Webpage](#) on the [UIT website](#).

Visit the [Knowledge Base](#) for additional supports and information about general tech requirements for students including information about devices, operating systems, software, internet connection, and major-specific tech requirements.

### **Communication**

Course communication and announcements will be made via Blackboard and email.

### **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:**

- Receive any additional information or assistance for any exam other than what was provided during class or approved tutor sessions.
- Copy from another student's test.
- Collaborate with or seek aid from another student who may have previously taken the exam.
- Knowingly use, buy, sell, steal, or solicit in whole or in part the contents of any exam.
- Bribe another person to obtain information about any exam.

#### **Department of Physical Therapy Honor Code Pledge:**

***“Upon my honor as professional student in the physical therapy program at the University of North Dakota, I pledge that I will not give nor receive unauthorized aid on written examinations, laboratory practical examinations, written assignments, take home assignments or clinical assignments.”***

***Examination disclaimer: “I affirm that I have adhered to the Honor Code in this assignment.”***

### **Assignment and Late Work Policy**

Due dates for each assignment or activity will be posted in Blackboard. All assignments must be submitted by the due date and time posted in the course. All times are posted in the Central Time Zone.

The acceptance and grading of late assignments is at the discretion of the instructor. If extenuating circumstances arise, it is your responsibility to contact the instructor prior to the due date and request an extension. All requirements for this course must be completed during the course dates.

## **Scholastic Standards Policy**

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 / assignments, and written block exam scores) of 76% must be achieved to pass the course. A 76% score is the minimum passing score for each of the 4 written block exams. Remediation with the instructor is required for a written exam score below 80%. See the UND-PT *Scholastic Standards* document for further reference.

## **Course Evaluation**

Near the end of the semester, you will be asked to complete an online course evaluation form (SELF). Your feedback on the course is extremely valuable to us. We read our students' comments carefully and use them to improve the course the next time we teach it.

**When the time comes, please let us know which aspects of the course helped you learn—and which aspects might be modified to help future students learn more effectively.**

- Please note that the course evaluations are anonymous and that we won't see the results until after the grades for the course are submitted, allowing you to provide honest and constructive feedback.
- Throughout the semester if you have concerns or feedback, please reach out to schedule a time for discussion.

## **\*Course Syllabus and Schedule Subject to Change\***

## **University of North Dakota Policies & Resources**

### **Technical Requirements & Assistance**

Whether you're taking courses in the classroom or online, it's important to have the right technology and equipment. Visit the [UND Technical Requirements](#) webpage for more information. Students are expected to use their official UND email in the course. For technical assistance, please contact [UND Technical Support](#) at 701.777.2222. Visit the University Information Technologies (UIT) website for their hours, help documents and other resources.

### **Resources**

UND cares about your success as a student. For more information, visit the Student Resources Page for additional information. Students have access to assistance from the UND Writing Center, Tutoring and Learning Services, Testing Services, and more.

Students also have access to the UND Student Resource Site via Blackboard. It is recommended that you become familiar with the tools and tutorials within Blackboard to better equip you in navigating the course and Educational Technology including Yuja, VoiceThread, Discussion Boards, Riipen, Smart Thinking, Proctoring, etc.

### **Accessibility Statement**

The University of North Dakota is committed to providing equal access to students with documented disabilities. To ensure access to this class and your program, please contact [Accessibility for Students](#) to engage in a confidential discussion about accommodations for the classroom and clinical settings. Accommodations are not provided retroactively. Students are encouraged to register with Accessibility for Students at the start of their program.

More information can be obtained by email, [UND.accessibilityforstudents@UND.edu](mailto:UND.accessibilityforstudents@UND.edu), or by phone at 701.777.2664.

## **Religious Accommodations**

UND offers religious accommodations, which are reasonable changes in the academic environment that enable a student to practice or observe a sincerely held religious belief without undue hardship on the University. Examples include time for prayer or the ability to attend religious events or observe a religious holiday. To request an accommodation, complete the [student religious accommodation request form](#). If you have any questions, you may contact the [Equal Opportunity & Title IX Office](#).

## **Pregnancy Accommodations**

Students who need assistance with academic adjustments related to pregnancy or childbirth may contact the Equal Opportunity & Title IX Office or Academic Affairs to learn about your options. Additional information and services may be found at [Pregnancy Resources](#).

## **Resolution of Problems**

Should a problem or grievance occur, you should speak to your instructor first. If the problem is not resolved by speaking with your instructor, refer to the *UND-PT Scholastic Standards* and *UND-SMSH Grievance and Appeal* policy. Students are required to work through the channels of communication as follows: student, course instructor, department chair, associate dean of health sciences, dean of SMHS. Should the problem persist after taking these initial steps, you have the right to go to the provost next, and then to the president.

## **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, Assistant Vice President for Equal Opportunity & Title IX and Title IX/ADA Coordinator, 102 Twamley Hall, 701.777.4171, [UND.EO.TitleIX@UND.edu](mailto:UND.EO.TitleIX@UND.edu) or the Office for Civil Rights, U.S. Dept. of Education, 230 S. Dearborn St., 37<sup>th</sup> Floor, Chicago, IL 60604 or any other federal agency.

## **Reporting of Discrimination, Harassment, or Sexual Misconduct**

If you or a friend has experienced sexual misconduct, such as sexual harassment, sexual assault, domestic violence, dating violence, or stalking, please contact the [Equal Opportunity & Title IX Office](#) or UND's Title IX Coordinator, Donna Smith, for assistance: 701.777.4171; [donna.smith@UND.edu](mailto:donna.smith@UND.edu); or visit the [Title IX webpage](#). You may also contact the Equal Opportunity & Title IX office if you or a friend has experienced discrimination or harassment based on a protected class, such as race, color, national origin, religion, sex, age, disability, sexual orientation, gender identity, genetic information, pregnancy, marital or parental status, veteran's status, or political belief or affiliation.

## **Faculty Reporting Obligations Regarding Discrimination, Harassment, or Sexual Misconduct**

It is important for students to understand that faculty are required to share with UND's Title IX Coordinator any incidents of sexual misconduct or of discrimination or harassment based on a protected class that 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 impacted by discrimination, harassment, or sexual misconduct, you can find information about confidential support services on the [Equal Opportunity & Title IX webpage](#).

## **Health and Safety**

UND is committed to maintaining a safe learning environment while providing quality learning experiences for our students. 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 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 Community Standards](#). If 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 Accessibility for Students at 701.777.2664 or [UND.accessibilityforstudents@UND.edu](mailto:UND.accessibilityforstudents@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](mailto:UND.EO.TitleIX@UND.edu).

## **UND Cares Program**

### ***How to Seek Help When in Distress***

We know that while college is a wonderful time for most students, however, some students may struggle or have issues that arise. You may experience students in distress on campus, in your classroom, in your home, and within residence halls. Distressed students may initially seek assistance from faculty, staff members, their parents, and other students. In addition to the support we can provide to each other, there are also professional support services available to students through the Dean of Students and University Counseling Center. Both staffs are available to consult with you about getting help or providing a friend with the help that he or she may need. For more additional information, please visit the [UND Cares Program Webpage](#).

## **Land Acknowledgement Statement**

Today, the University of North Dakota rests on the ancestral lands of the Pembina and Red Lake Bands of Ojibwe and the Dakota Oyate - presently existing as composite parts of the Red Lake, Turtle Mountain, White Earth Bands, and the Dakota Tribes of Minnesota and North Dakota. We acknowledge the people who resided here for generations and recognize that the spirit of the Ojibwe and Oyate people permeate this land. As a university community, we will continue to build upon our relations with the First Nations of the State of North Dakota - the Mandan, Hidatsa, and Arikara Nation, Sisseton-Wahpeton Oyate Nation, Spirit Lake Nation, Standing Rock Sioux Tribe, and Turtle Mountain Band of Chippewa Indians.

## **Additional Resources**

It is my goal to foster an environment of mutual respect in which everyone feels comfortable voicing their opinions, sharing their stories, and learning about potentially heavy or personally relevant material. If, at any point, you feel like the information covered in this class elicits thoughts, feelings, or concerns that you would like to discuss further, don't hesitate to reach out to me, or the [UND Counseling Center](#) (701-777-2127).

Further, if you experience extenuating circumstances, sexual violence, identity-based harm, or any other personal crisis during the semester, don't hesitate to reach out to me so we can provide academic assistance and help you in this course, and put you in contact with the appropriate resources and services (if needed).

- [UND Care Team](#): 701-777-2664 (8:00 AM to 4:30 PM M-F) or 701-777-3491 (evenings and weekends)
- [UND Campus Police](#): 701-777-3491 · UND Student Health: 701-777-4500
- [UND Title IX Resources](#)
- [Abuse and Rape Crisis Hotline \(CVIC\)](#): 701-746-8900 (24 hours)
- [Grand Forks Police Department](#): 701-787-8000 (24 hours)
- [Emergency Room](#): 701-780-5280
- [UND Student Diversity and Inclusion](#): 701-777-6985
- [Food For Thought Pantry](#): (Wilkerson Commons Room 169; 701-777-4200)
- [National Suicide Prevention Lifeline](#): (1-800-273-8255)