

**University of Florida**  
**College of Public Health & Health Professions Syllabus**  
**OTH 3416 Pathophysiology for Rehabilitation (3 credit hours)**  
**Spring 2015**  
Delivery Format: On-Campus  
HPNP Auditorium (Room 1404)

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Preferred Course Communications: email

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**Prerequisites:** anatomy and physiology

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## **PURPOSE AND OUTCOME**

### **Course Overview:**

The purpose of this course is to provide the student with basic understanding of pathophysiology as a change from normal physiological functioning of the various systems of the human body. The course is based on illness and disease within a systems framework. Emphasis is put on select conditions most often encountered by occupational therapists and other health professionals. The course focuses on critical thinking used to analyze the signs and symptoms based on understanding the pathophysiological mechanisms and integration of knowledge.

### **Relation to Program Outcomes:**

This course is required for pre-OT students and Post-Baccalaureate students as part of a series of pre-requisite basic science courses. These courses must be taken before entering the UF-MOT program. Additionally, this is a required course for Junior students in the BHS program.

### **Course Objectives and/or Goals**

This course partially meets one of the Education Standards for the American Council for the Accreditation of OT Education (ACOTE). The student will:

B.1.4 Demonstrate knowledge and understanding of the structure and function of the human body to include the biological and physical sciences. Course content must include, but is not limited to, biology, anatomy, physiology, neuroscience, and kinesiology or biomechanics.

More specifically, the student is expected to perform the following:

1. Apply physiological principles to understanding pathophysiological processes within the systems of the human body.
2. Understand the differences between physiological functioning and pathophysiological processes in the various systems of the human body.
3. Analyze the relationships among signs and symptoms and pathophysiological processes of selected illnesses and diseases in adults.
4. Apply critical thinking to analyze presentations of signs and symptoms based on the underlying pathophysiological processes.

### **Instructional Methods**

Lecture, audiovisual materials, course texts, and notes posted on E-learning. Some material may be delivered in a blended learning format.

## Blended Learning

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

A Blended Learning class uses a mixture of technology and face-to-face instruction to help you maximize your learning. Knowledge content that, as the instructor, I would have traditionally presented during a live class lecture is instead provided online before the live class takes place. This lets me focus my face-to-face teaching 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 professional.

*What is expected of you?*

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 class sessions. If you are not prepared for the face-to-face sessions, you may struggle to keep pace with the activities occurring in the live 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 class. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.

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## DESCRIPTION OF COURSE CONTENT

**Topical Outline/Course Schedule:** see the detailed schedule information at the end of this document!

Week	Date(s)	Topic(s)
1	1/6 – 1/8	Cellular Biology: cytoplasm and organelles
2	1/13 – 1/15	Cellular Biology: nucleus, genes and genetic disease
3	1/20 – 1/22	Cellular biology: cell membrane; Cellular functions
4	1/27 - 1/29	Altered biology: cellular adaptation, cellular injury, and aging
5	2/3 - 2/5	Fluids and electrolytes
6	2/10 – 2/12	EXAM 1; Acids and Bases
7	2/17 – 2/19	Cardiovascular system function; dysfunction of blood vessels
8	2/24 – 2/26	Cardiovascular system: dysfunctions of the heart
9	3/2 – 3/6	<b>SPRING BREAK</b>
10	3/10 – 3/12	Endocrine System and diabetes
11	3/17 – 3/19	Diabetes
12	3/24 – 3/26	<b>EXAM 2</b> ; Immunity
13	3/31 – 4/2	Immunity: inflammation, regeneration
14	4/7 – 4/9	Immunity: hypersensitivity, infection, immunodeficiency
15	4/14 – 4/16	Cancer: biology and types
16	4/21 – 4/22	Cancer: metastasis and treatment
17	4/27 – 4/29	<b>EXAM 3</b>

## Course Materials and Technology

### A. Required:

1. Required reading materials will be posted on E-learning for every class (noted as S in the schedule below). E-Learning Support Website: <http://lss.at.ufl.edu/> \*\*\*Notice: no WWW\*\*\*
2. Some form of classroom response system (clickers) will be used in this class. The specific type, whether virtual or real, will be announced in class. Please stay tuned as you will need to purchase a license to use it.

**B. Recommended (optional):**

1. Huether, S.E., & McCane, K.L. Understanding pathophysiology (Latest Edition). St. Louis: C.V. Mosby.

For technical support for this class, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

**ACADEMIC REQUIREMENTS AND GRADING****Assignments**

The grade is based on exams and quizzes, which are composed of objective questions (multiple choice and matching questions) only.

- Exams: there are 3 exams, 60 questions (120 points) each.
- Quizzes: there are 4 online quizzes for a total of 120 points.

**Grading**

Test	Number of questions	Points per question	Points per test	Percent grade
Exam 1	60	2	120	24%
Exam 2	60	2	120	24%
Exam 3	60	2	120	24%
Quizzes	Variable	Variable	120	24%
Professional Behavior*			20	4%
<b>Total</b>			<b>500</b>	<b>100 %</b>

\*Professional points are based on class attendance. Missing lecture without prior arrangements will result in subtracting 2 points per missed attendance check.

Point system used (i.e., how do course points translate into letter grades).

<b>Points earned</b>	465-500	450-464	435-449	415-434	400-414	385-399	350-384	335-349	315-334	300-314	0-299
<b>Letter Grade</b>	A	A-	B+	B	B-	C+	C	D+	D	D-	E

According to college policy, a grade of "C" (350 points or more) is necessary to pass the course for students who take this as a required course!

Letter grade to grade point conversions are fixed by UF and cannot be changed.

<b>Letter Grade</b>	A	A-	B+	B	B-	C+	C	D+	D	D-	E	WF	I	NG	S-U
<b>Grade Points</b>	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at: <http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

### Exam Policy

Exams will be administered in the Computer Testing Center, located in the Communicore Building room CG-27/28. Exams are scheduled for a different time than class. If you have a valid scheduling conflict, please email the TA as soon as possible so that we can accommodate you.

### Policy Related to Make up Exams or Other Work

Makeup exams will not be given without prior arrangements with the Course Instructor. "Prior" means at least one day in advance. Failure to do this will result in a zero grade for that test or assignment. Emergencies have to be documented (such as a medical exemption). Undocumented absence from an exam or an assignment will result in a score of "0" on that assignment. Makeup exams that are given due to authorized absence may be oral exams.

### Policy Related to Required Class Attendance

- Students are expected to attend lecture. A sign-up sheet will be passed around on randomly selected dates. Missing lecture will result in subtracting 2 points per lecture.
- Missing class without prior arrangements (for definition of "prior" see above) will result in point subtraction as mentioned above. Personal issues regarding attendance or fulfillment of course requirements will be handled on an individual basis.
- All faculty members are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

## STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

### Expectations Regarding Course Behavior

1. **Preparation for class:** To maximize the use of class time, you are expected to:
  - Look at E-learning for announcements and get the notes prior to each class.
  - Read and study assigned readings prior to class.
2. **Class behavior:** You are also expected to:
  - Be on time for class
  - Stay until class is dismissed
  - Silence your cellular phone
  - Be courteous by refraining from chatter and other distracting behaviors
  - Do not look at external material during class (newspaper, Facebook, twitter, etc.)
  - Arrange with the instructor in advance if you cannot attend class so you can get pertinent handouts and announcements

### Communication Guidelines

Please email the instructors and TAs directly (email addresses are above) rather than using the E-learning. For digital communication expectations see: *Netiquette Guidelines*: <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

### Academic Integrity

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 feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

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## **SUPPORT SERVICES**

### **Accommodations for Students with Disabilities**

If you require classroom accommodation because of a disability, you must register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class. The Dean of Students Office will provide documentation of accommodations to you, which you then give to me as the instructor of the course to receive accommodations. Please make sure you provide this letter to me by the end of the second week of the course. The College is committed to providing reasonable accommodations to assist students in their coursework.

### **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.
- You 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>

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.

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[The detailed class schedule is on the next page](#)

## CLASS SCHEDULE

<u>Day</u>	<u>Periods</u>	<u>Time</u>	<u>Location</u>
Tuesdays	7 <sup>th</sup> & 8 <sup>th</sup>	1:55 - 3:50	HPNP Auditorium
Thursday	6 <sup>th</sup>	12:50 - 1:40	HPNP Auditorium

\*\*\* NOTE: this is a tentative schedule

WEEK	TOPIC	READINGS
Week 1 1/6; 1/8	Introduction to the course	Ch 1; 2
	Cellular Biology <ul style="list-style-type: none"> <li>Cellular Biology: cytoplasm and organelles</li> </ul>	
Week 2 1/13; 1/15	Cellular Biology <ul style="list-style-type: none"> <li>Cellular Biology: cytoplasm and organelles</li> <li>Genes and genetic disease</li> </ul>	Ch 1; 2
	Cellular Biology <ul style="list-style-type: none"> <li>Cellular biology: cell membrane</li> <li>Cellular functions</li> </ul>	
Week 3 1/20; 1/22	Cellular Biology <ul style="list-style-type: none"> <li>Cellular adaptations</li> <li>Cellular injury</li> <li>Aging</li> </ul>	Ch 3
	Altered Cellular and Tissue Biology	
Week 4 1/27; 1/29	Fluids and Electrolytes	Ch 4
Week 5 2/3; 2/5	<b>EXAM 1: CG-28 (Computer testing Center) from 1:00 – 2:30 and 2:30 – 4:00 PM</b>	
Week 6 2/10	Acids and Bases	Ch 4
Week 7 2/17; 2/19	The Cardiovascular System	
	Normal cardiovascular Structure and Function	Ch 22
	Alterations of Cardiovascular Function: Diseases of blood vessels	Ch 23
Week 8 2/24; 2/26	The Cardiovascular System	Ch 23
	Alterations of Cardiovascular Function: <ul style="list-style-type: none"> <li>Disease of the heart muscle</li> <li>Heart Rhythm, cardiomyopathies</li> <li>Heart failure, Shock</li> </ul>	
Week 9 3/3; 3/5	<b>SPRING BREAK</b>	
Week 10 3/10; 3/12	The Endocrine System	Ch 17, 18
	Mechanism of hormonal regulation	
	Alteration of hormonal regulation: Diabetes	
Week 11 3/17; 3/19	The Endocrine System	Ch 18
	Diabetes (cont.)	

WEEK	TOPIC	READINGS
<b>Week 12</b> 3/24	<b>EXAM 2: CG-28 from 1:00 – 2:30 and 2:30 – 4:00 PM</b>	
3/26	<b>The Immune System</b>	
	Immunity: <ul style="list-style-type: none"> <li>• Characteristics of the Immune Response</li> <li>• Induction of the Immune Response</li> </ul>	Ch 5
<b>Week 13</b> 3/31; 4/2	<b>The Immune System</b>	Ch 5
	Immunity (cont.): <ul style="list-style-type: none"> <li>• Humoral Immune Response</li> <li>• Cell-mediated Immune Response</li> </ul>	
	Inflammation Regeneration and Repair	Ch 6
<b>Week 14</b> 4/7; 4/9	<b>Immune Alterations:</b> Hypersensitivities, Infection, and Immunodeficiencies	Ch 7
<b>Week 15</b> 4/14; 4/16	<b>Cancer</b>	Ch 9-10
	<ul style="list-style-type: none"> <li>• Biology of Cancer</li> <li>• Types of Cancer</li> </ul>	
<b>Week 16</b> 4/21	<b>Cancer</b>	Ch 9-10
	<ul style="list-style-type: none"> <li>• Metastasis – Tumor Spread</li> <li>• Treatment</li> </ul>	
<b>Week 17</b> Tuesday 4/28	<b>FINAL EXAM: CG-28 from 1:00 – 2:30 and 2:30 – 4:00</b>	

\*\*\* NOTE: this is a tentative schedule