

# Human Pathophysiology for the Exercise Sciences

APK5133 | Class # 23633 (2104) | 3 Credits | Fall 2024

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## Course Info

### INSTRUCTOR

**Paul A. Borsa, PhD, ATC**

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### OFFICE HOURS

Office hours: by appointment

### MEETING TIME/LOCATION

R Period 3-5 (9:35am - 12:35pm, FLG 235)

**Course Description:** In-depth study of current concepts and theories related to the prevention and management of athletic injuries and other medical conditions; including factors affecting inflammation and healing, and the role of therapeutic intervention, exercise, and rehabilitation.

**Prerequisite Knowledge and Skills:** A background in human anatomy and physiology is expected and will be helpful.

**Required and Recommended Materials:** There will be no required textbook for this course, however lecture notes will be posted to Canvas in .pdf format. In addition, recommended and supplemental readings will be available for students to download or photocopy.

**Course Format:** A hybrid or flipped class method will be used as a means of presenting course material. Lectures have been pre-recorded and made available to students on Canvas. Students will be able to download lecture modules to various media sources (smartphone, ipod, ipad, MP3 player, laptop, etc.), and view/listen to them during the week/days before class (asynchronous learning). Class periods will be used for in-depth follow-up discussions led by the instructor and students (synchronous learning).

**Course Learning Objectives:** At the conclusion of this course, the student is expected to:

1. Demonstrate an understanding of the patho-anatomical and physiological mechanisms of acute and chronic inflammation, healing, and repair of connective tissues and other related conditions.
2. Demonstrate a comprehension of the biomechanical and neuromuscular processes related to the development of bone, cartilage, ligament, muscle, tendon, and nerve injuries commonly seen in athletes and physically active individuals.
3. Identify and describe selected therapeutic agents and intervention methods used in the clinical management of sports related injuries and illnesses.
4. Demonstrate an understanding of the clinical implications therapeutic agents have on the healing process.
5. Demonstrate an understanding of the role of proprioception and neuromuscular control in the management and rehabilitation of athletic injuries.

## Course and University Policies:

**Personal Conduct Policy:** Students are expected to exhibit behaviors that reflect highly upon themselves and our University. Outline for them exactly what that means in the context of your course. UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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.” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the instructor or TA in this class.

**Exam Make-up Policy:** No makeup examinations or quizzes will be given without a serious and/or compelling reason. “Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.”

**Accommodating Students with Disabilities:** “Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive; therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.”

**Course evaluations:** Students in this class are participating in GatorEvals. This evaluation system is designed to be more informative to instructors so that teaching effectiveness is enhanced and to be more seamlessly linked to UF’s CANVAS learning management system. Students can complete their evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/> . Thank you for serving as a partner in this important effort.

## Getting Help:

### Health and Wellness

- U Matter, We Care: If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) or 352 392-1575
- Counseling and Wellness Center: <https://counseling.ufl.edu/>, 352-392-1575
- Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161
- University Police Department, 392-1111 (or 9-1-1 for emergencies) <http://www.police.ufl.edu/>

### Academic Resources

- E-learning technical support, 352-392-4357 (select opti on 2) or e-mail to [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu). <https://lss.at.ufl.edu/help.shtml>
- Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling. <https://career.ufl.edu/>
- Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <http://teachingcenter.ufl.edu/>
- Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>
- Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/> On-Line Students Complaints: <http://distance.ufl.edu/student-complaint-process/>

## Grading:

Evaluation Components	Points	Weighting (%)
Quizzes/Mini-Exams	400	60
Discussion Boards	25	15
Project	50	25
Attendance/Participation	N/A	0
Total	475	100

**Weekly Quizzes** will be completed on CANVAS. Each quiz will be worth 25-50 points. Quiz format will be multiple choice, True/False, fill in the blank, matching and maybe short answer.

**Discussion Boards.** There will be 5 Discussion Boards (5 points each = 25 points). Students are required to participate in all discussion board assignments. To receive full credit for each post, please write a minimum of 200 words (3-pt deduction if not sufficient), but feel free to write as much as you need-keep in mind, some topics take more explanation than others. Reference your sources, if possible. Also, respond to at least 2 peers with a minimum of 50 words each (1-pt deduction for each deficient peer response).

<b>Length of post:</b> Discussion thread posts should be 200 words or more in length.	<b>3 pts</b> If post is 200 or more words in length.	<b>0 pts</b> If post is less than 200 words in length.
<b>Number of replies:</b> Each student should respond to at least 2 peers (50 words or more for each).	<b>2 pts</b> If you respond to at least 2 peers.	<b>0 or 1 pt</b> 0 pts if you do not respond to any peers, 1 pt if you respond to 1 peer, and 2 pts if you respond to 2 peers.

**Course Project.** To demonstrate critical thinking and application of major concepts taught in this course students will be required to complete a course project. Each student will present on a clinical topic of choice (approved by instructor) and submit a written report on the topic (25 points). The format and design of the Report and Presentation, as well as the grading rubric and due dates will be posted as a separate document on CANVAS.

**Attendance** (and participation) is expected but will not affect grading.

**Grading Scale:** *More detailed information regarding current UF grading policies can be found here:* <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>.

Letter Grade	Percent of Total Points Associated with Each Letter Grade	GPA Impact of Each Letter Grade
A	90.00-100%	4.0
B+	87.00-89.99%	3.33
B	80.00-86.99%	3.0
C+	77.00-79.99%	2.33
C	70.00-76.99%	2.0
D+	67.00-69.99%	1.33
D	60.00-66.99%	1.0
E	0-59.99%	0

## Weekly Course Schedule:

<b>Week</b>	<b>Date</b>	<b>Lecture Topic</b>	<b>Assignment</b>	<b>Due Dates</b>
1	Aug 22	Course Overview	Disc Board 1	Aug 30
2	Aug 29	The Injury Process: Concepts of Sports Injury	Quiz 1	Sep 4
3	Sept 5	The Injury Process: Injury Prevention Strategies	Quiz 2	Sep 11
4	Sept 12	The Injury Process: Physiological & Psychological Response	Disc Board 2 Quiz 3 & 4	Sep 13 Sep 18
5	Sept 19	The Injury Process: Musculoskeletal Injuries	Disc Board 3 Quiz 5 & 6	Sep 20 Sep 25
6	Sept 26	Head (Concussion) & Face Injuries	Disc Board 4 Quiz 7	Sep 27 Oct 2
7	Oct 3	Spinal Conditions: Cervical and Lumbar Regions	Quiz 8	Oct 9
8	Oct 10	Internal: Abdominal/Thoracic Injuries	Quiz 9	Oct 16
9	Oct 17	Common Injuries of the Upper Extremity	Quiz 10	Oct 23
10	Oct 24	Common Injuries of the Lower Extremity	Disc Board 5 Quiz 11	Oct 25 Oct 30
11	Oct 31	Exertional Conditions	Quiz 12	Nov 6
12	Nov 7	Dermatological & Other Medical Conditions	Quiz 13 & 14 Written Report	Nov 13
13	Nov 14	Student Presentations		
14	Nov 21	Student Presentations		
15	Nov 28	Thanksgiving Holiday – no class		