

# Human Pathophysiology for the Exercise Sciences

APK 5133 | Sections 2H00, MH00, 6145

Spring 2022

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**COURSE DESCRIPTION:** In-depth study of current concepts and theories related to macro-traumatic and micro-traumatic injuries; including factors affecting inflammation and repair, and the role of therapeutic intervention, in preventing and managing common sports-related injuries, illnesses and medical conditions.

## Course Objectives

Upon completion of this course students are expected to successfully:

1. Examine the patho-anatomical and patho-physiological mechanisms of acute and chronic inflammation healing and repair of connective tissues and other related conditions.
2. Analyze 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. Evaluate selected therapeutic agents and intervention methods used in the clinical management of sports related injuries and illnesses.
4. Interpret the clinical implications therapeutic agents have on the healing process.
5. Assess the role of proprioception and neuromuscular control in the management and rehabilitation of athletic injuries.

## Instructor

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

Associate Professor

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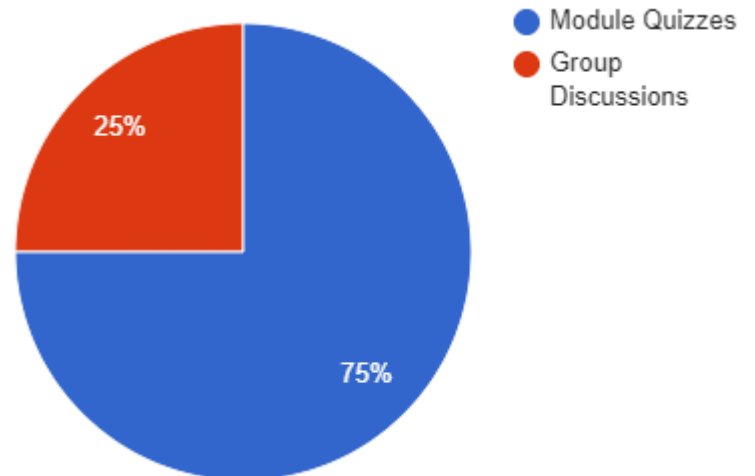
## Course Requirements

75% - Module Quizzes

25% - Group Discussions

## Grading Scale

A	= 100-93	C(S)	= 76.99-73
A-	= 92.99-90	C-(U)	= 72.99-70
B+	= 89.99-87	D+	= 69.99-67
B	= 86.99-83	D	= 66.99-63
B-	= 82.99-80	D-	= 62.99-60
C+	= 79.99-77	E	= 59.99-0



See current UF Grading Policies for further details:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

## Course Schedule

Week	Module	Assignment	Due Date	Point Value
1	Introduction to Pathophysiology Concepts of Sports Injury	Group Discussion 1 Quiz	Jan 9 Jan 12	5 20
2	Injury Prevention Strategies	Quiz	Jan 19	30
3	The Injury Process: Physiological Response to Injury	Group Discussion 2 Quiz	Jan 23 Jan 26	5 30
4	The Injury Process: Physiological & Psychological Response to Injury	Quiz	Feb 2	20
5	Bone & Joint Pathology Impaired Proprioception & Neuromuscular Control	Group Discussion 3 Quiz	Feb 6 Feb 9	5 40
6	Skeletal Muscle & Tendon-related Injuries	Group Discussion 4 Quiz	Feb 13 Feb 16	5 30
7	Injuries to the Head/Face	Quiz	Feb 23	30
8	Injuries to the Cervical and Lumbar Spine	Quiz	Mar 2	40
9	Internal Injuries to the Abdominal/Thoracic Regions	Group Discussion 5 Quiz	Mar 6 Mar 9	5 30
10	Common Injuries to the Upper Extremity	Group Discussion 6 Quiz	Mar 13 Mar 16	5 30
11	Common Injuries to the Lower Extremity	Quiz	Mar 23	30
12	Exertional Conditions: Part 1	Quiz	Mar 30	15
13	Exertional Conditions: Part 2	Group Discussion 7 Quiz	Apr 3 Apr 6	5 15
14	Dermatological Conditions	Quiz	Apr 13	20
15	Other Medical Conditions	Quiz	Apr 20	20

## Course Requirements

Module quizzes and group discussions will be used to assess the student's academic standing in this course. **Late assignments will not be accepted for credit unless arrangements have been made with the instructor prior to the due date for that particular assignment.** Failure to make prior arrangements may result in rejection of work submitted late as rescheduling/accepting assignments is at the discretion of the instructor. Requirements for class attendance and make-up exams, assignments, and other work are consistent with university policies:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

### 25% - Discussion Boards/Assignments

**7 Discussion Boards X 5 points each = 35 points**

**Overview: Students are required to participate in all group discussion board assignments. The quality of engagement in this activity will be noted and graded accordingly.**

- Final post is due by Sunday of the week by 11:59 pm

### 75% - Course Quizzes

**14 Module Quizzes = 400 points total this semester**

**Overview: Students will be assessed throughout the semester by taking weekly module quizzes.**

Students are required to complete quizzes and turn them in by due date assigned. Point value per quiz will vary.

Please review each quiz's instructions & guidelines

- Students will be assessed over the following course materials: lectures only

## Course Policies & Information

### Course Information and Policies

Students should be aware that online learning is different than a traditional classroom experience and can present unique challenges, particularly to individuals who do not possess good time management skills. The online classroom is available to you 24 hours a day. Unlike traditional instructional settings in which each student gets the same class at a set time and day, the online setting gives students the opportunity to tailor class to their particular learning style. You should note, however, that this course is not completely self-paced. As listed on the class calendar, there are select times during which units and course materials will be available and are due. You can view each unit's lectures at any time during the dates in which that specific unit is open. Please note that all quizzes, exams, assignments, discussion posts, etc. must be completed and submitted by the due date listed on the syllabus. Quizzes and exams will only be available to you on the date(s) and time(s) listed on the syllabus. Since we will not have in-class meeting times for me to remind you of critical dates, it is essential to familiarize yourself with the course schedule, deadlines, and due dates.

### Make Up Policy:

Assignments/Quizzes/Discussion posts/etc. will not be accepted late, and on some days more than one of these tasks may be due. If personal circumstances arise that may interfere with your ability to meet a deadline, **please let me know as soon as possible before the due date.** Please keep in mind only university authorized excuses will be accepted, and documentation must be provided. Requirements for make-up exams, assignments, and other work are consistent with university policies: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

### Communication and Questions:

Students are responsible for getting a University of Florida email account (e.g., john.doe@ufl.edu) and should use this email for all university related correspondence – The instructor may not read emails from or send emails to any non-UF email addresses (e.g., john.doe@hotmail.com). Email subject should start with "SPM 4723 – First name, Last name - ..." Email use does not relieve students from the responsibility of confirming the communication with the instructor. Always sign your email – don't make the instructor guess from whom the email was sent. The instructor will answer your email within two business days, when possible.

You may email me through the course site with any questions or concerns you have, and I will attempt to respond to your emails within 48 hours (typically sooner). If you have an urgent issue, please call my office and/or email my personal UF email, [pborsa@ufl.edu](mailto:pborsa@ufl.edu).

For general course questions, I encourage you to check the **Course Questions Discussion Board** since other students may have the same question. If you do not find an answer, post your question using a descriptive subject line. All students are expected to follow rules of common courtesy in email messages, discussions, chats, etc. Please review the [Netiquette Guide](#) (also on course website) for further important information.

#### **University Policy on Accommodating Students with Disabilities:**

Students with disabilities requesting accommodations should first register with the Disability Resource (DSR) Center (352-392-8565; [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. You must submit this documentation to your instructor prior to submitting assignments or taking the quizzes or exams. Accommodations are not retro-active, therefore, students should contact the DSR office as soon as possible in the term for which they are seeking accommodations

#### **Honor Code Policy:**

*“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”*

The following pledge will be either required or implied on all work:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It is the duty of the student to abide by all rules set forth in the UF Undergraduate Catalog. Students are responsible for reporting any circumstances, which may facilitate academic dishonesty. University Policy on Academic Misconduct: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at:

<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

#### **Academic Integrity:**

All students must adhere to university regulations regarding academic integrity. Any form of academic dishonesty (including but not limited to any form of cheating, plagiarism, misrepresentation, etc.) will not be tolerated. Any student guilty of academic dishonesty will receive a failing grade (E) for the course, and the matter will be forwarded to the UF Office Student Affairs and the Dean of Students.

#### **Grade Appeal Policy:**

Should you want to contest a grade, you will have up to three (3) days after a grade has been posted to contact me and discuss your issue; after which the grade is final. Grades are based on a point scale.

#### **Getting Help:**

The University of Florida recognizes that pursuit of an online degree requires just as much student support as pursuit of a traditional on-campus degree and, therefore, each online program is responsible for providing the same student support services to both students who are in residence on the main campus and those who are seeking an online degree through distance learning. The following links provide support services for students:

#### **[Online Computing Help Desk- e-Learning Support Services](#)**

The UF Computing Help Desk is available to assist students with technical issues. If you have any issues accessing the online course material you must contact the UF Computing Help Desk immediately for assistance and obtain a case number. I will not accept late assignments, or change any course dates, due to technology difficulties if you do not have a case number prior to the due date for the assignment.

For issues with technical difficulties in E-learning, please contact the UF Help Desk:

[helpdesk@ufl.edu](mailto:helpdesk@ufl.edu)

(352) 392-4357

<https://elearning.ufl.edu/student-help-faqs/>

Other resources are available at: <https://distance.ufl.edu/getting-help/>

### **Online Library Help Desk**

The help desk is available to assist students with access to all of the UF Libraries resources.

### **Disabilities Resource Center**

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. If you have a physical, learning, sensory or psychological disability, please visit our Disabilities Resource Center.

### **Honorlock Quiz and Exam Proctoring Information:**

Honorlock will proctor your quizzes and examinations this semester. Honorlock is an online proctoring service that allows you to take your exam from the comfort of your home. You DO NOT need to create an account, download software or schedule an appointment in advance. Honorlock is available 24/7 and all that is needed is a computer, a working webcam, and a stable internet connection.

To get started, you will need Google Chrome and to download the Honorlock Chrome Extension. You can download the extension at [www.honorlock.com/extension/install](http://www.honorlock.com/extension/install)

When you are ready to test, log into Canvas/E-Learning, go to your course, and click on your exam. Clicking launch Proctoring will begin the Honorlock authentication process, where you will take a picture of yourself, show your ID, and complete a scan of your room. Honorlock will be recording your exam session by webcam as well as recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device.

Honorlock support is available 24/7/365. If you encounter any issues, you may contact Honorlock by live chat, phone (844-243-2500), and/or email ([support@honorlock.com](mailto:support@honorlock.com))

**U Matter, We Care** - Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

### **Copyright Statement:**

The materials used in this course are copyrighted. The content presented is the property of UF and may not be duplicated in any format without permission from the College of Health and Human Performance and UF, and may not be used for any commercial purposes.

Content includes but is not limited to syllabi, videos, slides, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy or distribute the course materials, unless permission is expressly granted. Students violating this policy may be subject to disciplinary action under the UF Conduct Code.

**Disclaimer:** This syllabus represents the objectives and tentative plans for the course. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, will be communicated clearly, are not unusual, and should be expected.