

# Diagnostic Imaging for Athletic Trainers

ATR 7229c | 3 Credits | Fall 2023

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## Course Info

**INSTRUCTOR** Dr. Brady L. Tripp, LAT, ATC  
Office: 148 FLG  
Office Phone: 352-294-1725  
Email: [trippb@ufl.edu](mailto:trippb@ufl.edu)  
Preferred Method of Contact: **Email**

**OFFICE HOURS** By appointment, Tuesdays 2:00-4:00, email to confirm.

**MEETING TIME/LOCATION** In-person  
Tuesdays, 10:40 AM-1:40 PM / Yon Hall 11

## COURSE DESCRIPTION

Provides Athletic Trainers background information on the physics, physiology, appropriate use and appraisal of diagnostic imaging techniques used in sports medicine including: radiography, magnetic resonance imaging, ultrasonography and nuclear medicine. Athletic Trainers develop skills interpreting diagnostic imaging and analyze the principles and procedures used in each technique.

## PREREQUISITE KNOWLEDGE & SKILLS

Pre-requisite: Admission into the Doctor of Athletic Training program.

## REQUIRED & RECOMMENDED MATERIALS

Reading materials will be available on the class Canvas page or the instructor will provide soft or hard copies in person. Journal articles will be used frequently. Other articles will be available online and retrieved from various libraries.

## COURSE FORMAT

Course material will be presented through video and in-person lectures, online materials, and interactive workshop formats with 3.0 contact hours per week. This class will consist primarily of class roundtable discussions and some didactic presentations. Canvas will provide students with video lectures, content to supplement discussions, details regarding assignment expectations and grading criteria/rubrics and serve to assist the student with applicable resources for programmatic success within the Doctor of Athletic Training Program.

## COURSE LEARNING OBJECTIVES

1. Identify, compare, and contrast the physics and physiology behind various diagnostic imaging techniques
2. Evaluate normal and abnormal anatomy or physiology on various diagnostic imaging techniques
3. Evaluate pathologic anatomy or physiology associated with conditions commonly sustained by the physically-active population
4. Critically assess the published evidence evaluating the diagnostic value of imaging used in sports medicine

## Course & University Policies

### ATTENDANCE & PARTICIPATION POLICY

Attendance is mandatory. Students must provide a written notification of an absence (i.e., email) at least 24 hours prior to class; excused absences will be evaluated based on university policy. Students with an excused absence will be afforded make-up opportunities under the University guidelines. Prior preparation through chapter readings and outlining will enable active participation for productive discussions. Requirements related to class attendance are consistent with [University policies](#).

**Critical-Thinking Questions and Participation:** Each student, as part of his/her participation, is expected to ask questions. Insightful questions will be monitored during the year and contribute to participation grade. In addition, attending class, contributing to class, and useful information provided during class will be counted toward your participation grade. Any class period listed as "discussion", requires prior review of posted content to facilitate a valuable learning experience. Failure to come to class "prepared" creates an ineffective environment for valuable exchange of information. The instructor will use the rubric in the table below to assign participation points during discussion sessions (see dates within the course schedule listed as "discussion").

|              |        |  |
|--------------|--------|--|
| Excellent    | 10 pts | Defines, describes, and illustrates concepts<br>Explains, assesses, and criticizes ideas<br>Demonstrates preparation and reading of assignments                                      |
| Good         | 8 pts  | Defines, describes, and illustrates concepts<br>Explains, assesses, and criticizes ideas<br>Evidence of reading assignments, but not fully prepared                                  |
| Reasonable   | 6 pts  | Defines, describes, and illustrates concepts<br>Explains, assesses, or criticize some ideas<br>Evidence of incomplete reading of assignments and preparation                         |
| Basic        | 4 pts  | Defines and describes some concepts<br>Explains but cannot assess and criticize ideas<br>Clearly unprepared and lacking evidence of reading assignments                              |
| Bare Minimum | 2 pts  | Defines and describes some concepts<br>Unable to explain, assess, or criticize ideas<br>Clearly unprepared and lacking evidence of reading assignments                               |
| Unacceptable | 0 pts  | Refuses to engage in discussion or answer questions when asked<br>Engaged into inappropriate behaviors (using cell phone, social media, visiting irrelevant websites)<br>Not present |

## PERSONAL CONDUCT POLICY

**Academic Honesty:** 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](#) specifies several 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.

- All students are expected to conduct themselves in a respectful and responsible manner
- All students are expected to be on time for class
- All students are expected to turn off or silence their electronics
- All students are expected to not participate in actions that may disrupt the class
- The instructor reserves the right to ask any student to leave the classroom, if the student violates any the above class expectations

**Plagiarism:** Defined as the use and appropriation of another's work without any indication of the source and the representation of such work as the student's own. Any student, who fails to give credit for ideas, expressions or materials taken from another source, including internet sources, projects/papers submitted for another course (either intentional or unintentional), is guilty of plagiarism (*please refer to the DAT Program Plagiarism Policy in the Student Handbook*).

## EXAMINATION & MAKE-UP POLICY

Written examinations will be administered via Canvas and will range in points from 75 – 300 and include a variety of question formats (e.g., multiple choice, select all that apply, matching and rank order). Each examination will include a practical portion that will include palpations, special tests, and diagnostic imaging. Practical portions will include a time limit of 10 to 20 minutes. There will be no make-up examinations unless exceptional conditions occur (as defined in the [University of Florida Catalog](#)). Prior permission from the professor is required.

A student experiencing an illness should visit the UF Student Health Care Center or their preferred healthcare provider to seek medical advice and obtain documentation. If you have an illness, family emergency or death, please contact the [Dean of Students Office](#) and follow the [DSO Care Team procedures](#) for documentation and submission of a request for make-up assignment. The DSO will contact the instructor. Do not provide any documentation to the instructor regarding illness or family emergency; this is your personal and protected information. The DSO is qualified to receive and verify the documents you provide. The instructor will follow the recommendations from the DSO. 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](#).

There will be a time limit for each examination. Examinations will evaluate your understanding of material from lecture, text, and other supplemental material provided. Examinations may be administered via e-learning using lock-down browser or additional proctoring method. You should visit the [website](#) (Links to an external site) and download "Lock Down Browser" for either Windows or MAC. It may take 5-10 minutes to download so please complete the process prior to accessing an examination. As a reminder, please be sure to have a secure internet access when taking examinations - do not use a Wi-Fi access, as this is not a stable and consistent option. For MAC users, Safari is not a compatible internet browser with Canvas - please use either Internet Explorer, Google Chrome, or Firefox (version 10 or 12 - not version 11) when accessing the e-learning system. If you have issues during an examination, please call the help desk 352-392-4357. You should complete examinations during Help Desk hours so you will have access to assistance if needed. If you have an issue during a quiz/examination,

please email the instructor once you have submitted the examination. Access to examinations after submission is restricted, but you will see the grade and it will be posted in the course gradebook. 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](#).

**Quizzes:** Quizzes will assess learning progress from lecture material and assigned readings. There will be a time limit for each quiz. To ensure that you are reading the assigned material, the quizzes may be both announced and unannounced. Quizzes will range from 1-25 points and include a variety of question formats (e.g., multiple choice, select all that apply, matching and rank order). For quizzes administered in e-Learning you may use notes only upon request of the instructor. You should employ examination best practices (stated above) for e-Learning quizzes. There will be no make-ups for missed quizzes (showing up late, etc.), unless exceptional conditions occur as defined in the University of Florida Undergraduate Catalog. Please see this [link](#) for more information.

## GRADING

| Letter Grade | Grade Points | Percentage |
|--------------|--------------|------------|
| A            | 4.00         | 92 - 100   |
| A-           | 3.67         | 89 - 91    |
| B+           | 3.33         | 87 - 88    |
| B            | 3.00         | 82 - 86    |
| B-           | 2.67         | 79 - 81    |
| C+           | 2.33         | 77 - 78    |
| C            | 2.00         | 72 - 76    |
| C-           | 1.67         | 69 - 71    |
| D+           | 1.33         | 67 - 68    |
| D            | 1.00         | 62 - 66    |
| D-           | 0.67         | 60 - 61    |
| E            | 0.00         | Below 60   |

| Item   | Percentage  |
|--|-------------|
| Canvas Written Exams (2)                           | 34%         |
| Practical Exams (2)                                | 14%         |
| Critical Appraisals (4-5)                          | 22%         |
| Quizzes (13-18)                                    | 20%         |
| Diagnostic Ultrasound Demonstration (1)            | 6%          |
| Critical-Thinking Questions and Participation (13) | 4%          |
| <b>Total</b>                                       | <b>100%</b> |

More detailed information regarding current UF grading policies can be found [here](#).

## ASSIGNMENTS & PROJECTS

Assignments/projects are to be uploaded prior to the onset of class on the date assigned to them. Late assignments/projects may not be accepted. However, we understand that different life events happen. If an assignment or project needs to be turned in late to ensure quality work and accommodate to any life events you may be experiencing, please communicate this with Dr. Tripp, and the TAs. If you will be traveling for a clinical-sanctioned event, your assignment/project remains due prior to the onset of class on the date assigned to them.

You will complete the following **Assignments/Projects** throughout the semester:

**Critical Appraisals:** Dr. Tripp will assign topics in advance. Students will search published literature for evidence quantifying the diagnostic value of an assigned imaging technique on an assigned pathology. Students complete a critical appraisal of an appropriate study (highest level of evidence and most applicable) using the appropriate checklist (QUADAS primarily, for others, see [How to Critically Appraise an Article](#)). Students create a narrated PowerPoint presentation detailing their search strategy, results and critical appraisal. Assignments are to be submitted on Canvas prior to the onset of class.

### Literature Search Results and Critical Appraisal Rubric:

| Criteria   | Points     |
|--|------------|
| Search terms and results are appropriate   | 7          |
| Correct study design checklist employed  | 7          |
| Checklist items are interpreted and presented appropriately  | 48         |
| PowerPoint quality; including a table of best evidence from 2-4 of the highest quality studies (including- and in addition to, the article you review) | 14         |
| Video and narration quality  | 14         |
| Video is within time restrictions (5 min. for a single study; 8 min. for SR or M-A)  | 7          |
| A pdf of the article is included   | 3          |
| <b>Total</b>   | <b>100</b> |

**Diagnostic Ultrasound Demonstration:** Dr. Tripp will assign topics in advance. Students create a narrated PowerPoint/video demonstrating themselves identifying an anatomic structure using diagnostic ultrasound. Videos should be under 3 minutes in length and suitable for training classmates to perform the same technique. Students demonstrate the technique during class.

### Weekly Course Schedule

The course progression will tentatively follow the schedule below:

| Week | Date  | Topics  | Assignments   |
|------|-------|---|---|
| 1    | 8-29  | Overview of Syllabus and Materials; Radiography | Syllabus Quiz; Quiz-1; Discussion (Critical Thinking Questions and Participation) |
| 2    | 9-5   | Magnetic Resonance                              | Critical Appraisal; Quiz-2; Discussion (CTQP)                                     |
| 3    | 9-12  | Ultrasonography                                 | Critical Appraisal; Quiz-3; Discussion (CTQP)                                     |
| 4    | 9-19  | Nuclear Medicine: Bone Scintigraphy, SPECT, PET | Critical Appraisal; Quiz-4; Discussion (CTQP)                                     |
| 5    | 9-26  | SC and Shoulder                                 | Critical Appraisal; Quiz-5; Discussion (CTQP)                                     |
| 6    | 10-3  | Elbow   | Critical Appraisal; Quiz-6; Discussion (CTQP)                                     |
| 7    | 10-10 | Written and Practical Exam I                    |   |
| 8    | 10-17 | Forearm, Wrist and Hand                         | Critical Appraisal; Quiz-7; Discussion (CTQP)                                     |
| 9    | 10-24 | Foot and Ankle                                  | Critical Appraisal; Quiz-8; Discussion (CTQP)                                     |
| 10   | 10-31 | Knee  | Critical Appraisal; Quiz-9; Discussion (CTQP)                                     |
| 11   | 11-7  | Hip and Pelvis                                  | Critical Appraisal; Quiz-10; Discussion (CTQP)                                    |
| 12   | 11-14 | Thoracic and Lumbar Spine                       | Critical Appraisal; Quiz-11; Discussion (CTQP)                                    |
| 13   | 11-21 | Cervical Spine                                  | Critical Appraisal; Quiz-12; Discussion (CTQP)                                    |
| 14   | 11-28 | Face and Mandibular / Review                    | Critical Appraisal; Quiz-13; Discussion (CTQP)                                    |
| 15   | 12-5  | Written and Practical Exam II                   |   |

## COURSE EVALUATIONS

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available [here](#). Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students [here](#).

## Getting Help

### HEALTH & 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](#), 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)

### ACCOMMODATING STUDENTS WITH DISABILITIES

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting their [Get Started page](#). It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

### ACADEMIC RESOURCES

- [E-learning technical support](#), 352-392-4357 (select option 2) or e-mail to [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu).
- [Career Connections Center](#), Reitz Union, 392-1601. Career assistance and counseling.
- [Library Support](#). 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.
- [Writing Studio](#), 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
- [Student Complaints On-Campus](#); [On-Line Students Complaints](#)

### INCLUSION, DIVERSITY, EQUITY, & ACCESSIBILITY RESOURCES

For suggestions or concerns related to IDEA, please reach out to any of the following:

- Dr. Linda Nguyen, APK IDEA Liaison, [linda.nguyen@hnp.ufl.edu](mailto:linda.nguyen@hnp.ufl.edu)
- Dr. Rachael Seidler, APK Graduate Coordinator, [rachaelseidler@ufl.edu](mailto:rachaelseidler@ufl.edu)
- Dr. Joslyn Ahlgren, APK Undergraduate Coordinator, [jahlgren@ufl.edu](mailto:jahlgren@ufl.edu)