

ATR3088: Assessment of Head/Spinal/Upper Extremity Pathology

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|  | Department of Kinesiology |
| | ATR3088 |
| | 4 Units |
| Fall 2020 | |

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| Meeting days: Monday/Wednesday | Instructor: Casey Waller, PT,DPT,CAFS |
| Meeting times: 8-9:15 AM | Phone: (916) 833-8149 |
| Meeting location: Zoom | Email: cwaller@pointloma.edu |
| Final Exam: Wednesday December 2, 7:30-10 AM | Office location and hours: TBD, as needed |
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PLNU Mission

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Foundational Explorations Mission

PLNU provides a foundational course of study in the liberal arts informed by the life, death, and resurrection of Jesus Christ. In keeping with the Wesleyan tradition, the curriculum equips students with a broad range of knowledge and skills within and across disciplines to enrich major study, lifelong learning, and vocational service as Christ-like participants in the world's diverse societies and culture.

COURSE DESCRIPTION

This course equips students to implement the S.O.A.P. method of orthopedic assessment to specific injuries of the axial skeleton, central nervous system, thorax, abdomen and upper extremity. Clinical role-playing in the lab setting will allow students to practice and master injury/illness examination through the use of the differential diagnosis process.

Through class lectures, course readings and the textbook, you will be asked to engage in the critical process of differential diagnosis while conducting orthopedic assessments for the above joints. Most classes will be in a lecture format in order to enable us to cover the wide expanse of material. We will also use segments of class meetings as labs to refine your clinical assessment skills by using your colleagues as patients. This course is technology-enhanced in the sense that I've made all lecture slides, readings and assignments available on Canvas. You are upper

division students and should naturally be actively engaged with the course material. My goal in taking this approach is for you to take ownership of your learning and to actively seek knowledge and develop the “clinical mind” rather than being passive ‘receivers of knowledge’.

To be successful in this course, you should always take the mindset of actively synthesizing information presented in lecture and lab and applying it to the clinical setting. Specifically, this means that studying for quizzes and tests should involve reviewing and integrating the essential ideas by asking the “*Why?*” and “*So what does this mean?*” questions.

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SEP

COURSE LEARNING OUTCOMES

ATR 3088 will prepare you to:

- *Utilize and master the components of the orthopedic examination process (i.e. perform a thorough history, palpate, and utilize Special Tests) to determine the presence of physical problems in patients.*
- *Discover and execute the process of differential diagnosis, which involves determining which pathology-from among a variety of conditions-is the probable cause of an individual's symptoms.*
- *Describe and appraise the etiology, symptoms, signs and management of upper extremity injuries.*
- *Research, summarize, and critique contemporary literature on the evaluation and management of potentially catastrophic injuries to the cervical spine and brain.*
- *Through laboratory sessions, practice and become proficient in the clinical evaluation of upper extremity posture, flexibility, neurological function, and muscular strength.*

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

Required:

Title: Examination of Orthopedic and Athletic Injuries, 4th Ed. (you may buy 3rd or 4th edition of this book)

Author: Chad Starkey; Sara D. Brown

ISBN: 978-0-8036-3918-8

Publisher: F. A. Davis Company

Publication Date: 2015

Recommended:

Title: Special Tests for Orthopedic Examination, 3rd edition

Author: Jeff G. Konin; Holly Brader; Jerome A. Isear; Denise L. Wiksten

ISBN: ISBN 978-1-55642-741-1

Publisher: SLACK, Inc

Publication Date: January 28, 2006

Price: \$47.95

Optional: Hoppenfeld S. Physical Examination of the Spine and Extremities. Norwalk: Connecticut: Appleton & Lange.

COURSE CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 4 unit class delivered over 16 weeks. It is anticipated that students will spend a minimum of 37.5 participation hours per credit hour on their coursework. For this course, students will spend an estimated 150 total hours meeting the course learning outcomes. The time estimations are provided in the Canvas modules.

ASSESSMENT AND GRADING

1. Quizzes (7 quizzes, 10 pts each)

- *We will use weekly quizzes to assess understanding, keep on track, and then answer any questions that may come up throughout the semester. These quizzes are meant to be low-stakes, non-stressful, and ultimately focused on keeping our class on track.*
- *Quizzes will be made available each Wednesday after class, and will be due by the end of Friday in order to receive full credit. If quizzes aren't completed by Friday, one point will be deducted for each day that the quiz is late.*

2. Patient Case Differential Diagnosis Outlines (DDx) (10 DDx Assignments, 10 pts each)

- *These outlines require you to demonstrate the differential diagnosis process for each body region. The process refines your ability to determine (“rule in”) an injury from which a patient is suffering while excluding (“ruling out”) conditions that the examination findings do not support.*
- *Utilizing an outline format, outline the History, Inspection, Palpation, and Special Tests (including Functional, Ligamentous, and Neurological tests) used to assess pathologies in the following regions:*
 - *Face/EENT*
 - *Abdominal/Thorax*
 - *Thoracic Spine*
 - *Lumbar Spine*
 - *Brain*
 - *Cervical*
 - *Shoulder*
 - *C/S, shoulder, and UE (brachial plexus)*
 - *Elbow*
 - *Wrist/Hand*
- *Outlines are due as indicated on course schedule.*
- *Utilize and reference sources to support your findings.*

- *For the History section: after listing a specific question, provide specific rationale for asking that question (i.e., When you ask what a patient ate for breakfast, what specific symptom are you evaluating?)*
- *For Special Tests section: provide the specific pathology ruled-out with each test (e.g., When you perform the Straight Leg Raise, what specific pathology are you attempting to rule in/out?).*

3. Current Concepts Critique (1 assignment, 50 pts)

- *To supplement the textbook and our in-class discussions, you will be asked to read “current concepts” articles published recently in sports medicine journals throughout the semester and write a 1-2 page synthesis paper. The topics of the articles will be of your choosing and must coincide with topics covered in class lecture. The intent of this assignment is for you to be exposed to recent advances in the assessment, surgical repair, and prevention of particular upper extremity injuries. **You will be asked to share key findings during class in order to facilitate discussion.*
- *In groups of 3-4 students, choose 2 articles on a topic of your choosing to discuss, complete write up, and cover during class session (date shown on course schedule). Only one critique required per group, but there must be evidence that each member actively engaged in article finding, group discussion, write up, and class discussion.*

Format: each critique should be no longer than 1-2 double-spaced pages, 12pt font

Specific contents: the four components required for each critique are:

Bibliographic information (e.g., author, title, journal, volume, pages, year)

Key points of article (focus on new information/new perspective learned)

Critique: Strengths & Weaknesses of each article

Synthesis: Practical applications of the information presented (cite the “take-home” lesson)

4. Lab Practical Videos (3 midterm videos, 30 pts each; Final Video, 50 pts)

- *Lab practical videos will be assigned at the completion of each anatomically specific unit to evaluate student mastery of the psychomotor skills required of the allied health care professional. You will be given a patient case, and asked to create a video where you go through the relevant ROM, strength, and special tests pertaining to the case. Due to the “distanced” nature of our class this semester, these videos will be created with a friend or family member as your model. However, please let me know if this is not possible, and we will work together to find a solution. I promise I am flexible, and really want to ensure that this is not stress inducing, but facilitates your learning.*
- *Your video should include and discuss:*
 - *Each video should be a max of 10 minutes, under 10 minutes is fine as long as content is solid.*

- *At least 8 of the most useful tests to evaluate the involved region from the patient case that you are given.*
- *Demonstration of specific direction on patient positioning, direction of testing, S/S of a positive test, and pathology that each test rules in/out*
- *Wherever possible, comment on the reliability, sensitivity, specificity and predictive ability of the special tests that you choose (It is critical to understand which are the most clinically useful and valuable tests to choose when conducting a differential evaluation. Consult research articles in this area since these psychometric properties are continuing to be reported on.*
- *Indicate if a cluster of special tests might be used to increase your ability to diagnose a condition (e.g. SI joint tests)*

5. Lecture Exams (3 midterms, 50 pts each; Final exam, 100 pts)

- *We will have unit examinations to measure your mastery of the material. The final exam will be comprehensive and will require that you have a firm grasp of the orthopedic evaluation process for all joints of the upper extremity that we cover in class. It benefits you to speak with me early about if you will be unable to complete the exam by the indicated date, or if a family emergency has come up. There are no provisions for early or make-up examinations if you do not communicate clearly in advance.*
- *Examinations should be regarded as an assessment of your readiness to progress toward your given allied health care profession. They will also serve as a learning experience because I will provide detailed feedback for you. Finally, they are an opportunity to be accountable for your learning.*

6. Executive Summary: Review of Current Literature (1 assignment, 100 pts)

- *Requirements: ^{SEP}A formal paper is required based upon a thorough review and critical analysis of the current literature on one of the topics below. While a traditional research paper requires extensive analysis and writing, an executive summary summarizes or reviews the main points of a current topic for an audience that may not have time to read the literature on that topic. An effective executive summary analyzes and summarizes the most important points of the topic, and will often make a recommendation based on the analysis. Executive summaries are “stand alone” documents that give an audience the best current advice on a topic.*
- *Expectations are high for this paper; the finished product should be of such quality as to be eligible for submission to a peer-reviewed journal or to a student-writing contest (such as the NATA, APTA, or other foundation). You are free to select a topic of your choice on which to write your executive summary (your title does not have to match these exactly. Be innovative, but please have your professor review your working title if it deviates from those below.) I will have you turn in your Abstract, Introduction and Sources on a separate occasion before the final paper.*
- *Examples:*
 - *Evidence-based diagnosis and treatment of the Sacroiliac Joint*

- *Assessment of the Cervical Spine: pathomechanics, injuries and management strategies*
- *Classification systems for lumbar spine pathology: which classification system is best?*
- *Evidence based treatment and return to play guidelines for Mild Traumatic Brain Injury.*
- *“Differential Diagnosis of Glenohumeral Impingement Syndromes”*
- *“Differential Diagnosis of Glenohumeral Instability” or “Surgical options for treating anterior glenohumeral instability”.*
- *Another topic which has been approved by Dr. Waller.*

Grades will be based on the following:

Assignment:

- Quizzes 7@10 pts each=70 pts
- Patient Case DDx Outlines (10@10 pts each)=100 pts
- Midterm Lab Practical Videos 3@30 pts each=90 pts
- Written Exams 3@50pts each=150 pts
- Executive Summary=100 pts
- Current Concepts Critique=50 pts
- Final Exam Written (100 pts) and Practical Video (50 pts)=150 pts

| Sample Standard Grade Scale Based on Percentages | | | | |
|---|----------|----------|----------|----------------|
| A | B | C | D | F |
| A 93-100 | B+ 87-89 | C+ 77-79 | D+ 67-69 | F Less than 59 |
| A- 90-92 | B 83-86 | C 73-76 | D 63-66 | |
| | B- 80-82 | C- 70-72 | D- 60-62 | |

STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student’s responsibility to notify the institution of any change in his or her physical

location. Refer to the map on [State Authorization](#) to view which states allow online (distance education) outside of California.

INCOMPLETES AND LATE ASSIGNMENTS

All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas. Incompletes will only be assigned in extremely unusual circumstances.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See [Academic Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center (DRC@pointloma.edu or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all **synchronous** class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions (virtual or face-to-face), the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. In some courses, a portion of the credit hour content will be delivered **asynchronously** and attendance will be determined by submitting the assignments by the posted due dates. See [Academic Policies](#) in the Undergraduate Academic Catalog. If absences exceed these limits but are due to

Asynchronous Attendance/Participation Definition

A day of attendance in asynchronous content is determined as contributing a substantive note, assignment, discussion, or submission by the posted due date. Failure to meet these standards will result in an absence for that day. Instructors will determine how many asynchronous attendance days are required each week.

SPIRITUAL CARE

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith.

If students have questions, a desire to meet with the chaplain or have prayer requests you can contact the [Office of Spiritual Development](#)

USE OF TECHNOLOGY⊛

In order to be successful in the online environment, you'll need to meet the minimum technology and system requirements; please refer to the [Technology and System Requirements](#) information. Additionally, students are required to have headphone speakers compatible with their computer available to use. If a student is in need of technological resources please contact student-tech-request@pointloma.edu.

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.