

**KIN610: Evidence Based  
Practice & Decision Making  
in Kinesiology**

**Dates:** 8/27/18-10/19/18

**Meeting Day/Time:** Online

**Location:** Remote

**Credit Hours:** 3

**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 becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

**INSTRUCTOR INFORMATION**



**Instructor:** Prof. Ryan Nokes, M.A., ATC

**Email:** [rnokes@pointloma.edu](mailto:rnokes@pointloma.edu)

**COURSE DESCRIPTION**

This course will enable students to practice the judicious use of current best evidence in making decisions about the care of individual patients and clients. Students will learn to integrate the best external evidence with their clinical expertise and patient concerns to ask a focused question to satisfy the health needs of a specific patient; find the best evidence by searching the literature; critically appraise the literature; apply the results in clinical practice; and evaluate the outcomes in patients.

**COURSE AIM**

This course is intended to help you acquire the fundamental skills of reading and evaluating the research published by others and developing your own research plans in Kinesiology. A combination of approaches will be used including reading and discussion of research methods, group analysis of research examples, and preparing various elements of a research proposal. As this is a graduate course, there is considerable online discussion around theoretical material. This requires you to read the assigned material and interact with it through various methods (e.g., online quizzes, discussions, etc.).

## **INSTITUTIONAL LEARNING OUTCOMES (ILO)**

1. **Learning, Informed by our Faith in Christ**  
Students will acquire knowledge of human cultures and the physical and natural world while developing skills and habits of the mind that foster lifelong learning.
2. **Growing, In a Christ-Centered Faith Community**  
Students will develop a deeper and more informed understanding of others as they negotiate complex professional, environmental, and social contexts.
3. **Serving, In a Context of Christian Faith**  
Students will serve locally and/or globally in vocational and social settings.

## **PROGRAM LEARNING OUTCOMES (PLO)**

The Point Loma Nazarene University MS-AT graduate will be able to

1. Demonstrate competency in interpreting evidence-based research and improving clinical standards and practice through clinical question development and research methodology.
2. Develop expertise in the athletic training domains through an integrative experiential clinical model.
3. Demonstrate the appropriate knowledge and educational foundation required for an entry-level Certified Athletic Trainer.
4. Establish and understand the importance of inter-professional relationships, while collaborating with other health care professionals to become effective communicators.
5. Demonstrate preparation, knowledge and skill in the delivery of comprehensive healthcare to a diverse set of patients with musculoskeletal injuries and conditions and illnesses in a distinctly moral and ethical manner, integrating Christian faith with clinical practice.

## **COURSE LEARNING OUTCOMES (CLO)**

The following learning outcomes will be achieved by students in this course:

1. Explain the value and importance of evidence-based practice as it relates to solving relevant problems within the exercise and sport sciences. *\*See Information Literacy later in this syllabus.*
2. Employ a systematic approach (e.g., five step approach) to create and answer a relevant clinical question using a pre-defined question format (e.g., PICO= Patients, Intervention, Comparison, Outcomes).
3. Utilize databases and online critical appraisal libraries to conduct a literature search (e.g., Boolean search, Medical Subject Headings) to answer a relevant clinical question.
4. Use standard criteria or developed scales (e.g., Physiotherapy Evidence Database Scale [PEDro], Oxford Centre for Evidence Based Medicine Scale) to critically appraise the structure, rigor, and overall quality of research evidence and determine the efficacy of a clinical intervention.

5. Explain clinical outcomes assessment (e.g., disablement, health-related quality of life) and describe common methods of outcomes assessment for clinical practice (patient-based and clinician-based).
6. Apply the various methods of assessing patient status and progress (e.g., global rating of change, minimal clinically important difference, and minimal detectable difference).

### CREDIT HOUR INFORMATION

It is anticipated that students will spend a minimum of 50 participation hours per credit hour on their course work. As a graduate course, students can expect the work in this class to be significant, and students should plan on spending 18-22 hours a week engaged in the course. The estimated time expectations for this course are shown below:

Assignments	Pre-Course Hours	Course Hours	Post-Course Hours
Online Participation in discussions, groups, etc.	--	50	--
Writing	--	50	--
Other assignments and learning activities	1	40	1
Exams and Quizzes	--	8	--
<b>Total Course Hours</b>	<b>150</b>		

### RECOMMENDED RESOURCES

Hurley, W, Denegar, C, Hertel, J. (2011). LWW. *Research Methods: A Framework for Evidence Based Clinical Practice*.

#### RECOMMENDED

- Text: Arnold, B.L., Gansneder, B.M., & Perrin, D.H. (2005). *Research Methods in Athletic Training*. Philadelphia, PA: F.A. Davis Company.
- Course Reader and journal articles available in this Canvas course
- [AT Stills University EBM Website \(Links to an external site.\)](#)Links to an external site.

### ASSESSMENT AND GRADING

Your grades will be posted in the Canvas [Grades](#) area no later than midnight on Tuesday of each week beginning in Week Two of this course. It is important to read the comments posted in the Grades as these comments are intended to help you improve your work. Final grades will be posted within one week of the end of the class. Grades will be based on the following:

### *Grade Weighting*

Discussion Boards	40.0%
Assignments	40.0%
Quizzes & Surveys	20.0%
Total	100%

### *Grade Scale*

<b>A</b>	93-100	<b>C</b>	73-76
<b>A-</b>	90-92	<b>C-</b>	70-72
<b>B+</b>	87-89	<b>D+</b>	67-69
<b>B</b>	83-86	<b>D</b>	63-66
<b>B-</b>	80-82	<b>D-</b>	60-62
<b>C+</b>	77-79	<b>F</b>	0-59

## **ATTENDANCE**

Students taking online courses are expected to attend each week of the course. Attendance is defined as participating in an academic activity within the online classroom which includes posting in a graded activity in the course. (Note: Logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement.)

Students who do not attend at least once in any 3 consecutive days will be issued an attendance warning. Students who do not attend at least once in any 7 consecutive days will be dropped from the course retroactive to the last date of recorded attendance.

Students who anticipate being absent for an entire week of a course should contact the instructor in advance for approval and make arrangements to complete the required coursework and/or alternative assignments assigned at the discretion of the instructor. Acceptance of late work is at the discretion of the instructor and does not waive attendance requirements.

## **LATE ASSIGNMENTS**

- All assignments are to be submitted by the due date and time listed in the calendar via [Canvas](#).

- While there are due dates for weekly assignments, you are welcome to post your work earlier in the week. In our discussions, late work means that others may not have the opportunity to respond to your comments. It also means that you will not have the benefit of as much interaction with other students as you will have if your assignment is posted on time. If you know you will be away on the day your assignment is due, please post your work before you leave.
- Missed exams or quizzes may **ONLY** be made up with a legal, written excuse.
- Late work will **NOT** be accepted or graded; assignments will be considered late if posted **after midnight Pacific Standard Time on the day they are due**

## ACADEMIC HONESTY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. As explained in the university catalog, "Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the result of another person's creativity and effort. Violations of university academic honesty include cheating, plagiarism, falsification, aiding the academic dishonesty of others, or malicious misuse of university resources. An instructor who believes a situation involving academic dishonesty has been detected may assign a failing grade for a) that particular assignment or examination, and/or b) the course following the procedure in the university catalog. Students may appeal using the procedure in the university catalog. See [Academic Policies](#) for further information.

## ACADEMIC ACCOMMODATIONS

If you have a diagnosed disability, please contact Jean Moncada in the Center for Student Success (CSS) within the first two weeks of class to demonstrate need and to register for accommodation by phone at (619) 563-2849 or by e-mail at [jmoncada@pointloma.edu](mailto:jmoncada@pointloma.edu). Ask your academic advisor or program director for any additional accommodation information.

## SPIRITUAL CARE

PLNU strives to be a place where you grow as a whole person. To this end, we provide resources for our graduate students to encounter God and grow in their Christian faith. You'll find faith integration activities throughout this course. In addition, there are resources for your Christian faith journey available on the [Graduate Student Life](#) webpage.

## FERPA POLICY

As a student at Point Loma, you have a legal right to privacy as outlined in the federal FERPA (Family Educational Rights and Privacy Act) legislation. If I post grades or return assignments, I'll do so in a way that does not publicly reveal your name, PLNU student ID, or social security number without your written permission. See [Policy Statements](#) for full text.

## INSTRUCTOR FEEDBACK

Assignments will be graded as soon after the due date as possible and grades will be posted to the Canvas gradebook. If an immediate response is needed, email or phone the instructor.

### **INFORMATION LITERACY**

The curriculum of the MS-KIN is designed so that you develop skills in scientific writing, performing statistical analysis of data, reading and critically appraising primary literature, and incorporating current best evidence into your professional practice. Not all information is equally sound or applicable to your practice. Various assignments within this course are designed to accomplish the goal of informational literacy—to evaluate the validity and importance of information obtained from any source and use the information appropriately to solve relevant problems.

### **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](#) page.

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

If you do need technical help, you may click on the HELP button (located on the top-right corner of Canvas) and choose from whom you want assistance, or you may contact the campus helpdesk (619-849-2222).

### Course Schedule

Week	Topics	Assignments
1	Evidence-Based Athletic Training Developing the Clinical Question	Discussion Board 1&2 PICO Question Form Week 1 Quiz
2	Searching the Literature	Discussion Board 3&4 Searching the Literature Week 2 Quiz
3	Levels of Research Evidence	Discussion Board 4&5 Determining Levels of Evidence Week 3 Quiz
4	Critical Appraisal	Discussion Board 6 PEDro Scores PEDro Peer Review Week 4 Quiz
5	Evidence-Based Practice Statistics Part 1	Discussion Board 7&8 Effect Size Calculations Chunk 2 – CAT
6	Evidence-Based Practice Statistics Part 2 Introduction to Epidemiology	Discussion Board 9&10 Sensitivity and Specificity Odds & Risk Ratios Week 6 Quiz
7	Patient-Rated Outcomes & Disablement Models	Discussion Board 11 PRO Assignment Incidence/Prevalence
8	Critical Application of Evidence-Based Practice	Final CAT due

No	Competency
<b>EBP-1</b>	Define evidence-based practice as it relates to athletic training clinical practice.
<b>EBP-2</b>	Explain the role of evidence in the clinical decision-making process.
<b>EBP-3</b>	Describe and differentiate the types of quantitative and qualitative research, research components, and levels of research evidence.
<b>EBP-4</b>	Describe a systematic approach (eg, five step approach) to create and answer a clinical question through review and application of existing research.
<b>EBP-5</b>	Develop a relevant clinical question using a pre-defined question format (eg, PICO = Patients, Intervention, Comparison, Outcomes; PIO = Patients, Intervention, Outcomes).
<b>EBP-6</b>	Describe and contrast research and literature resources including databases and online critical appraisal libraries that can be used for conducting clinically-relevant searches.
<b>EBP-7</b>	Conduct a literature search using a clinical question relevant to athletic training practice using search techniques (eg, Boolean search, Medical Subject Headings) and resources appropriate for a specific clinical question.
<b>EBP-8</b>	Describe the differences between narrative reviews, systematic reviews, and meta-analyses.
<b>EBP-9</b>	Use standard criteria or developed scales (eg, Physiotherapy Evidence Database Scale [PEDro], Oxford Centre for Evidence Based Medicine Scale) to critically appraise the structure, rigor, and overall quality of research studies.
<b>EBP-10</b>	Determine the effectiveness and efficacy of an athletic training intervention utilizing evidence-based practice concepts.
<b>EBP-11</b>	Explain the theoretical foundation of clinical outcomes assessment (eg, disablement, health-related quality of life) and describe common methods of outcomes assessment in athletic training clinical practice (generic, disease-specific, region-specific, and dimension-specific outcomes instruments).
<b>EBP-12</b>	Describe the types of outcomes measures for clinical practice (patient-based and clinician-based) as well as types of evidence that are gathered through outcomes assessment (patient-oriented evidence versus disease-oriented evidence).
<b>EBP-13</b>	Understand the methods of assessing patient status and progress (eg, global rating of change, minimal clinically important difference, minimal detectable difference) with clinical outcomes assessments.

No	Competency
<b>EBP-14</b>	Apply and interpret clinical outcomes to assess patient status, progress, and change using psychometrically sound outcome instruments.
<b>PHP-1</b>	Describe the concepts (eg, case definitions, incidence versus prevalence, exposure assessment, rates) and uses of injury and illness surveillance relevant to athletic training.
<b>PHP-2</b>	Identify and describe the measures used to monitor injury prevention strategies(eg, injury rates and risk, relative risks, odds ratios, risk differences, numbers needed to treat/harm).
<b>PHP-6</b>	Summarize the epidemiology data related to the risk of injury and illness associated with participation in physical activity.
<b>CE-9</b>	Identify functional and patient-centered quality of life outcome measures appropriate for use in athletic training practice.
<b>CE-10</b>	Explain diagnostic accuracy concepts including reliability, sensitivity, specificity, likelihood ratios, prediction values, and pre-test and post-test probabilities in the selection and interpretation of physical examination and diagnostic procedures.