	Department of Kinesiology **ATR 6007: Research Project Seminar - Data Analytics in Athletic Medicine** **1 unit**

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Summer 2023

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Instructors:

Meeting Location: Hybrid/Remote

Meeting times: Zoom Sync

Zoom Coordinates: 5:00pm - 6:30PM PT

https://pointloma.zoom.us/j/97154741030?pwd=K2Zhc2JTNHpIM1ZxdGUzN2FTMmd4dz09

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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 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.

COURSE DESCRIPTION AND AIM

This course provides attendees an introductory education around the concept of Data Analytics and its application to clinical athletic training. Rapidly growing complexity and enormity of clinical data sources present significant challenges to practitioners. Surviving this new normal requires constant growth and innovation to advance clinical practice metrics, optimize patient outcomes, and demonstrate practitioner value. Data Analytics is an established health IT framework designed to facilitate the conversion of clinical data to meaningful action. This course exposes attendees to essential understanding of this infrastructure and important steps involved when implementing a "culture of analytics" within an individuals practice or organization.

WEEKLY MEETING SCHEDULE

Week 1 - May 9th (Pre-Recorded Lecture, Quiz, and Discussion Board)

Week 2 - May 16th (Zoom Sync)

Week 3 - May 23rd (Zoom Sync)

Week 4 - May 30th (Zoom Sync)

Week 5 - June 6th (Zoom Sync)

Week 6 - June 13th (Zoom Sync)

Week 7 - June 20th (Pre-Recorded Lecture and Quiz)

Week 8 - June 27th (Pre-Recorded Lecture and Quiz)

PROGRAM LEARNING OUTCOMES

Upon completion of the Master of Science in Athletic Training (MS-AT), the successful student will be able to:

1. To prepare students to demonstrate competency in interpreting evidence-based research and improving clinical standards and practice through clinical question development and research methodology
2. To prepare students to develop expertise in the athletic training domains through an integrative experiential clinical model
3. To equip students with appropriate knowledge and educational foundation required for an entry-level Certified Athletic Trainer
4. To prepare students to establish and understand the importance of inter-professional relationships, while collaborating with other health care professionals to become effective communicators

5. To prepare students to demonstrate preparation, knowledge and skill in the delivery of comprehensive health care 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

Upon completing this course, you should be able to:

1. Define the concept of Data Analytics and recognize its role in the area of health information technology.
2. Describe the types of analytics and their differentiation in the analysis of clinical data.
3. Identify the logistical steps involved when implementing any Data Analytics project.
4. Recognize attributes of industry leading Data Analytics technologies and classify their individualized role in the lifecycle of clinical data.
5. Distinguish common terminology used in data analytics to inform internal evaluations of current data management strategies within their organization.

REQUIRED TEXT - There will be some ad-hoc readings that will be included in relevant modules but there is not a required textbook related to this course.

COURSE CREDIT HOUR INFORMATION

It is anticipated that students will spend a minimum of 37.5 participation hours per credit hour on their course work. It is estimated that all 15 weeks of the course will take roughly 150 hours to complete.

ASSESSMENT AND GRADING

Your grades will be posted in the Canvas gradebook no later than midnight on Tuesday of each week beginning in Week Two of this course. It is important to read the feedback

provided in the gradebook as these comments are intended to help you improve your work. Final grades will be posted within ten days of the end of the class. Multiple measures of evaluation are used in the course, allowing students opportunities to demonstrate their learning in more than one way, and giving consideration to individual learning styles. Course components that will be evaluated include:

Assignment Category	Percentage of Final Grade
Discussions	25%
In Class Activities	25%
Attendance & Participation	30%
Assignments	20%

Discussions

We will utilize the Discussion Board feature of canvas to expand upon topics raised during class and from your reading of the textbook and outside journals. You will have the opportunity, via the discussion Boards, to interact with your fellow students and with me and to discuss topics of interest to you. You are invited to become engaged with others in this class as you debate issues raised in the questions, examine and analyze case studies related to the content, and respond to the comments of your classmates.

For each Discussion Board topic, you will be required to post one response of your own and to post two replies to classmates. Thus, you must respond at least **three times** to each Discussion Board topic on Canvas. Your response to a classmate's post may include one or more of the following:

- Ask a probing question
- Share an insight from having read your classmate's post
- Offer and provide evidence to support an opinion
- Validate a classmate's idea with reference to your own experiences
- Make a suggestion for improvement
- Expand on your classmate's post.

To receive full credit for your participation, your initial post must be completed by 11:59 PM PST on Wednesday and response to your classmates' posts (minimum of two) must be completed by 11:59 PM PST on Saturday.

Lessons

Each week you will read through a guided lesson on Canvas. In addition to text and video content, these lessons will include quiz questions and free-response sections to allow

you to check your comprehension of the material and ask any questions for the professor to answer in class.

Activities

These assignments are the main focus of the class, and they will typically be due the day before class or at 11:59 PM PST on Sunday. These activities will allow you to apply the concepts learned in the class to real-world scenarios that an allied health care management professional will encounter. As such, many of these activities will make excellent portfolio pieces for you as an Athletic Training student.

Attendance & Participation

You must attend each face-to-face class session and participate actively in our in-class discussions and activities.

ACADEMIC ACCOMMODATIONS

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

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 Graduate and Professional Studies Catalog. If absences exceed these limits but are due to   university excused health issues, an exception will be granted.

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.

At Point Loma Nazarene University, attendance is required at all scheduled classes. Adult Degree Completion courses are taught in the hybrid format, which means some class meetings will be face-to-face and some will be online. Attendance in the face-to-face classes is to be for the entire time of the class. Arriving late or leaving early will be considered a partial absence. A day of attendance in an online class is determined as contributing a substantive note, assignment, discussion, or submission that adds value to the course as determined by the instructor. Three days of attendance are required each week.

Face-to-face Portion of the Hybrid course

In blended or hybrid courses, if a student misses one face-to-face class then the faculty member will send an email to the student and the Director of Student Success warning of attendance jeopardy. There are no exceptions to this policy.

If a student misses two face-to-face classes, the faculty member or Vice Provost for Academic Administration (VPAA) will initiate the student's de-enrollment from the course without further advanced notice to the student. If the date of de-enrollment is past the last date to withdraw from a class, the student will be assigned a grade of "F" and there will be no refund of tuition for that course.

Online Portion of the Hybrid Course

If a student misses two online classes (fails to contribute to a discussion board) during the course, then the faculty member will send an email to the student and the Director of Student Success warning of attendance jeopardy. There are no exceptions to this policy.

If a student misses three online classes (fails to contribute to a discussion board by the due date) during the course, then the faculty member or Vice Provost for Academic Administration (VPAA) will initiate the student's de-enrollment from the course without further advanced notice to the student. If the date of de-enrollment is past the last date to withdraw from a class, the student will be assigned a grade of "F" and there will be no refund of tuition for that course.

1 missed F2F class = warning

2 missed F2F classes = de-enrollment

2 missed online classes = warning

3 missed online classes = de-enrollment

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.

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. At the Balboa Regional Center, College of Health and Sciences, Rev. Kevin Portillo, M.Div. serves as Graduate Chaplain. If you have questions, have a desire to meet, or share a prayer request with Rev. Portillo, you can contact him directly at kevinportillo@pointloma.edu.

SEXUAL MISCONDUCT AND DISCRIMINATION

Point Loma Nazarene University faculty are committed to helping create a safe learning environment for all students. If you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that help and support are available through the [Title IX Office](#). Please be aware that under Title IX of the Education Amendments of 1972, it is required to disclose information about such misconduct to the Title IX Office.

If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at counselingservices@pointloma.edu or find a list of campus pastors at the [Title IX Office | Get Help Now](#)

USE OF TECHNOLOGY

In order to be successful in the online or hybrid 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, microphone, or webcams compatible with their computer available to use. Please note that any course with online proctored exams requires a computer with a camera (tablets are not compatible) to complete exams online.

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

Point Loma Nazarene University encourages the use of technology for learning, communication, and collaboration. In this course, we will rely on Canvas for accessing course materials, submitting assignments, and collaborating in discussion boards and blogs. We will also use cell phone polling when it enhances our in-class activities. You'll want to make sure you are comfortable with these tools, so take advantage of our computer LabTechs to answer questions and help you with any technology issues. You may also call the Help Desk at x2222.

You are welcome to bring your laptop, iPad, and/or cell phone to class—but please make sure you use them appropriately and responsibly. *If a tech tool becomes a distraction or disruption while class is in session, I will ask you to put it away or invite you to no longer bring it to class.*

ACTIVE LEARNING

Your active participation in this class will be required. You will be responsible for your own learning by reviewing class material before and after class. I will guide you in this process; however, in the end, the onus of learning will be your responsibility. **Become intrinsically motivated to improve yourself and your understanding of management theories, policy and procedures, and application of**; if you do this you will succeed every time.

Here are some KEYS to success:

- EFFORT (Work hard)
- APPROACH (Work smart)
- ATTITUDE (Think positively)

Evidence-based medicine (EBM) is the integration of clinically relevant research, clinical

skills and experience, and patient preferences and values (Sackett et al 2000). The increased awareness **and focus on the practice of Evidence-Based Medicine comes from our daily need for valid information about diagnosis, prognosis, therapy, and prevention.** We want to ask local questions about the effectiveness of therapeutic modalities and design ways to find answers. The EBM portion of this course is **designed so students can explore therapeutic modalities commonly used in the athletic training setting** and determine what evidence is available to support their current uses.

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 the [Academic Honesty Policy](#) in the Graduate and Professional Studies Catalog for definitions of kinds of academic dishonesty and for further policy information.

COURSE RULES/GUIDELINES

Make-Ups

Make-up exams/quizzes will be given only if the professor is notified of the excused absence prior to the missed class or if the student has a legitimate emergency/illness Missed work will need to be completed by the following class period.

Late Work

Assignments not turned in the day and time they are due will automatically be docked 10% for each day that it is late.

Email

Email will be the **MAIN** form of communication used by the professor outside of class. Students are expected to check their email at least **ONCE A DAY**. If you know of issues with your @pointloma.edu account please notify the professor immediately.

Acceptable behavior

- Make sure cell phones are turned off and put away (no texting or making/receiving calls during class).
- Even if you don't always agree, you will have respect for each other's opinions as to what is being discussed in class.
- Everyone learns at a different rate; at no time should you make other's feel inadequate.

COMPETENCIES

No	Competency
PHP-8	Identify the necessary components to include in a preparticipation physical examination as recommended by contemporary guidelines (eg, American Heart Association, American Academy of Pediatrics Council on Sports Medicine & Fitness).
PHP-9	Explain the role of the preparticipation physical exam in identifying conditions that might predispose the athlete to injury or illness.
PHP-17i	Lightning strike
PHP-18	Explain strategies for communicating with coaches, athletes, parents, administrators,and other relevant personnel regarding potentially dangerous conditions related to the environment, field, or playing surfaces.
CE-23	Describe current setting-specific (eg, high school, college) and activity-specific rules and guidelines for managing injuries and illnesses.
TI-19	Identify manufacturer, institutional, state, and/or federal standards that influence approval, operation, inspection, maintenance and safe application of therapeutic modalities and rehabilitation equipment.
TI-20	Inspect therapeutic equipment and the treatment environment for potential safety hazards.
HA-2	Describe the impact of organizational structure on the daily operations of a healthcare facility.
HA-3	Describe the role of strategic planning as a means to assess and promote organizational improvement.
HA-4	Describe the conceptual components of developing and implementing a basic business plan.
HA-5	Describe basic healthcare facility design for a safe and efficient clinical practice setting.

HA-6 Explain components of the budgeting process including: purchasing, requisition, bidding, request for proposal, inventory, profit and loss ratios, budget balancing, and return on investments.

HA-7 Assess the value of the services provided by an athletic trainer (eg, return on investment).

HA-8 Develop operational and capital budgets based on a supply inventory and needs assessment; including capital equipment, salaries and benefits, trending analysis facility cost, and common expenses.

HA-9 Identify the components that comprise a comprehensive medical record.

HA-10 Identify and explain the statutes that regulate the privacy and security of medical records.

HA-11 Use contemporary documentation strategies to effectively communicate with patients, physicians, insurers, colleagues, administrators, and parents or family members.

HA-12 Use a comprehensive patient-file management system for appropriate chart documentation, risk management, outcomes, and billing.

HA-13 Define state and federal statutes that regulate employment practices.

HA-14 Describe principles of recruiting, selecting, hiring, and evaluating employees.

HA-15 Identify principles of recruiting, selecting, employing, and contracting with physicians and other medical and healthcare personnel in the deployment of healthcare services.

HA-17 Identify key regulatory agencies that impact healthcare facilities, and describe their function in the regulation and overall delivery of healthcare.

HA-18 Describe the basic legal principles that apply to an athletic trainer's responsibilities.

HA-19 Identify components of a risk management plan to include security, fire, electrical and equipment safety, emergency preparedness, and hazardous chemicals.

HA-20 Create a risk management plan and develop associated policies and procedures to guide the operation of athletic training services within a healthcare facility to include issues related to security, fire, electrical and equipment safety, emergency preparedness, and hazardous chemicals.

HA-21 Develop comprehensive, venue-specific emergency action plans for the care of acutely injured or ill individuals.

HA-23 Identify and explain the recommended or required components of a pre-participation examination based on appropriate authorities? rules, guidelines, and/or recommendations.

HA-25 Describe common health insurance models, insurance contract negotiation, and the common benefits and exclusions identified within these models.

HA-26 Describe the criteria for selection, common features, specifications, and required documentation needed for secondary, excess accident, and catastrophic health insurance.

HA-27 Describe the concepts and procedures for revenue generation and reimbursement.

HA-28 Understand the role of and use diagnostic and procedural codes when documenting patient care.

HA-30 Describe the role and functions of various healthcare providers and protocols that govern the referral of patients to these professionals.

PD-1 Summarize the athletic training profession's history and development and how current athletic training practice has been influenced by its past.

PD-2 Describe the role and function of the National Athletic Trainers' Association and its influence on the profession.

PD-3 Describe the role and function of the Board of Certification, the Commission on Accreditation of Athletic Training Education, and state regulatory boards.

PD-4 Explain the role and function of state athletic training practice acts and registration, licensure, and certification agencies including (1) basic legislative processes for the implementation of practice acts, (2) rationale for state regulations that govern the practice of athletic training, and (3) consequences of violating federal and state regulatory acts.

PD-5 Access, analyze, and differentiate between the essential documents of the national governing, credentialing and regulatory bodies, including, but not limited to, the NATA Athletic Training Educational Competencies, the BOC Standards of Professional Practice, the NATA Code of Ethics, and the BOC Role Delineation Study/Practice Analysis.

PD-6 Explain the process of obtaining and maintaining necessary local, state, and national credentials for the practice of athletic training.

PD-8 Differentiate among the preparation, scopes of practice, and roles and responsibilities of healthcare providers and other professionals with whom athletic trainers interact.

PD-10 Develop healthcare educational programming specific to the target audience (eg, clients/patients, healthcare personnel, administrators, parents, general public).

PD-11 Identify strategies to educate colleagues, students, patients, the public, and other healthcare professionals about the roles, responsibilities, academic preparation, and scope of practice of athletic trainers.

PD-12 Identify mechanisms by which athletic trainers influence state and federal healthcare regulation.

CIP-9 Utilize documentation strategies to effectively communicate with patients, physicians, insurers, colleagues, administrators, and parents or family members while using appropriate terminology and complying with statues that regulate privacy of medical records. This includes using a comprehensive patient-file management system (including diagnostic and procedural codes) for appropriate chart documentation, risk management, outcomes, and billing.