

## **Structural Kinesiology**

Meeting Days:	Tuesday, Thursday	Instructor:	Jacob R. Goodin, Ph.D., CSCS
Meeting Times:	Sec 1: 10:00a to 11:50a Sec 2: 12:30p to 2:20p	Phone:	(619) 849-2254
Meeting Location(s):	KIN 2	Email:	<a href="mailto:jgoodin@pointloma.edu">jgoodin@pointloma.edu</a>
Final Exam:	Tue 10/22, during class	Office Hours:	By appointment

### 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

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In-depth study of the structure and function of neuro-musculo-skeletal components of the human body in motion. Promotes mastery of anatomical structure and function in order to make useful application to movement analysis, and serves as a framework for advanced study of human movement for sport, fitness, and recreation.

Prerequisite: BIO 130

### COURSE LEARNING OUTCOMES

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In this course, successful students will learn to...

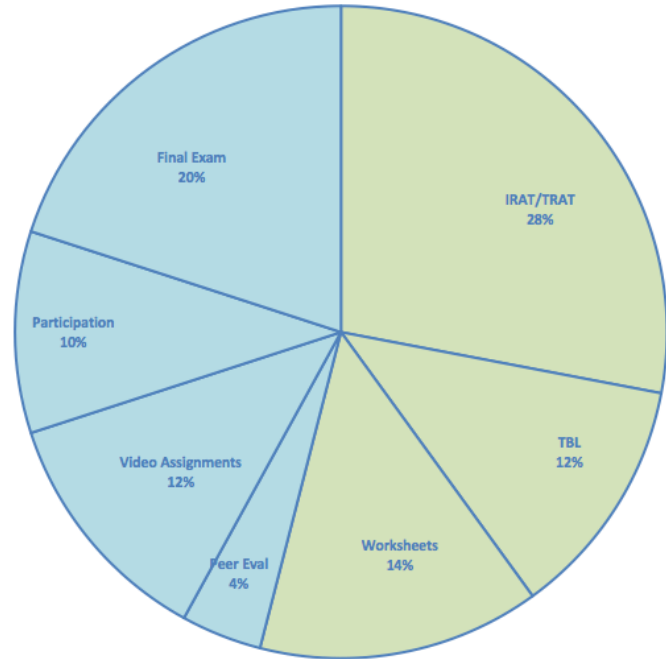
- Apply the language, concepts and procedures of Structural Kinesiology to the evaluation of human movement
- Identify diarthrodial joints and demonstrate the physiological motions of those joints by anatomical planes and axes.
- Demonstrate mastery of the structure and function of skeletal muscles and their primary and synergistic effects on kinetic chain dynamics.
- Articulate the design of the central nervous and peripheral nervous systems, sensory organelles' structures and functions.
- Illustrate the feedback loops associated with proprioceptive mechanisms and explain their significance to the efficiency and safety of human movement.
- Demonstrate typical and dysfunctional gait, sport, and rehabilitation skills.
- Design movement analysis techniques and report simple and complex motion in anatomically specific contexts and draw conclusions about the effectiveness, efficiency and safety of those motions.

- Contribute to and benefit from team-based learning which simulates the graduate and professional settings of your future.

## COURSE GRADING AND ASSIGNMENTS

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- Individual/Team Readiness Assurance Tests (IRAT/TRAT): (7 @20pts)
- Team Video Assignments: (6 @10pts)
- Team Based Learning (TBL) Activities: (6 @10pts)
- Worksheets: (7 @10pts)
- Peer Evaluation: (2 @10pts)
- Attendance & Participation: (50pts)
- Final: (100pts)



Total: 500 pts

The final grade percentage will be rounded to the nearest percent with grades being recorded as follows:

Grade	Percent	Grade	Percent	Grade	Percent
A	93 - 100	B-	80 - 82.9	D+	67 - 69.9
A-	90 - 92.9	C+	77 - 79.9	D	63 - 66.9
B+	87 - 89.9	C	73 - 76.9	D-	60 - 62.9
B	83 - 86.9	C-	70 - 72.9	F	0 - 59.9

## EDUCATIONAL OPPORTUNITIES

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Note: All assignments (except for IRATs and TRATs) are to be submitted electronically via Canvas

- 1) **Worksheets:** Group activities with both written and hands-on components designed to facilitate memorization, comprehension and application of the lecture and reading material. One work sheet per MAT will be submitted by the end of class. Some components of these worksheets may include:
  - i) Topographical anatomy assessment: take turns in roles as model, resister, palpater, and observer.
  - ii) Written observation
  - iii) Short answer questions
  - iv) Muscle action tables
  - v) Long answer/critical thinking questions

- 2) **Individual Readiness Assessment Test (IRAT):** Day 2 of each module will begin with an IRAT administered at the beginning of class. These assessments are designed to provide you, your team, and your professor with feedback on your readiness for the TBL activity topic of the day.
- The assessment is timed to be available for the first 10 minutes of class.
  - No provision is made for make-up or late arrival assessments.
  - Unlike the TRAT, students do not get immediate feedback on the IRAT
  - We will vote on whether the IRAT constitutes 40%, 50%, or 60% of your total IRAT/TRAT score (20 pts total).
  - You can drop your lowest IRAT score.
- 3) **Team Readiness Assessment Test (TRAT):** Taken after the IRAT is completed. Enhances mastery through team-based learning and discussion to determine correct answers.
- Work together with your team to reach a consensus on each answer.
  - Your team's answer to each question is scratched off the answer sheet.
  - The correct answer will reveal a star shape under the scratcher, an incorrect answer will be blank.
  - We will vote on whether the TRAT constitutes 40%, 50%, or 60% of your total IRAT/TRAT score (20 pts total).
  - The score for each item is based upon the number of attempts the team takes to get the correct answer
    - 1<sup>st</sup> attempt = 4 pts
    - 2<sup>nd</sup> attempt = 2 pts
    - 3<sup>rd</sup> attempt = 1 pts
    - 4<sup>th</sup> attempt = 0 pts
    - Divide total by 4, and multiply by the percent voted on above
  - No TRAT scores can be dropped.
- 4) **Video Assignments:** A MAT-based assignment that builds on the team-based learning activity giving students a chance to identify and discover anatomical structures, actions, and movement concepts. Each week a handout will explain the task(s) and give instructions for video assignment creation.
- a) Read and *understand* the handout as a team.
  - b) Complete each step of the handout as many times as necessary to develop proficiency.
  - c) Record and narrate video task, and submit to Canvas via dropbox by the due date. One video submission per MAT.
  - d) The grade for these assignments will consist of both a group and an individual component, so be sure to distribute work evenly.
- 5) **Peer Evaluations:** Students will rate each member of their team both qualitatively and quantitatively, focusing on positive qualities and constructive feedback with the intention

fostering of individual responsibility, personal growth, and humble teachability. These evaluations will be completed twice during the semester. The first evaluation will be graded for completion, and will serve as an early indicator of potential areas to improve in. Links to these evaluations can be found in Canvas and will be completed through Google Forms.

- 6) **Attendance and Participation:** Daily participation points will be earned by attending class and participating in class polls, questions, and discussions. These questions are graded only for participation, and will help us both assess your understanding of daily concepts and previous readings. We will use the Acadly app to track attendance and answer in-class questions. Although it won't excuse you from class, emailing your professor when you know you will be absent is common courtesy. After 2 absences, your overall grade will be docked with each absence. Absences during IRAT/TRAT days will result in a grade of "0" for the IRAT.
- 7) **Final Exam:** The final exam will be a written test covering material from the entire Quad. Questions will be presented in multiple choice format similar to the IRAT/TRATs.
- 8) **Textbook Reading:** Regular reading assignments will be assigned from the textbook in order to come prepared for the upcoming classes and be able to participate in the discussions and perform well on assessments.

#### REQUIRED TEXTS AND RECOMMENDED RESOURCES

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Required:

Floyd, R. T. *Manual of Structural Kinesiology*, 20<sup>th</sup> edition. McGraw-Hill Education (2017)

#### LATE AND INCOMPLETE ASSIGNMENTS

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All assignments are to be submitted/turned in according to the specified time in Canvas. Late assignments/quizzes will be docked 20% per day with assignments/quizzes submitted over 5 days late receiving a 0. Completes will only be assigned in extremely unusual circumstances.

#### FINAL EXAMINATION POLICY

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Successful completion of this class requires taking the final examination on its scheduled day, Tuesday, 9/22 during normal class time in KIN 2. No requests for early examinations or alternative days will be approved.

#### PLNU COPYRIGHT POLICY

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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

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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

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If you have a diagnosed disability, please contact PLNU's Disability Resource Center (DRC) within the first two weeks of class to demonstrate need and to register for accommodation by phone at 619-849- 2486 or by e-mail at [drc@pointloma.edu](mailto:drc@pointloma.edu). See [Disability Resource Center](#) for additional information.

#### PLNU ATTENDANCE AND PARTICIPATION POLICY

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Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report which may result in 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. See [Academic Policies](#) in the Undergraduate Academic Catalog.

#### TUTORING

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The PLNU Tutorial Center is available free of charge for all current, undergraduate PLNU students. It offers tutoring for most subjects, as well as for general help with paper editing, study skills, etc. The Tutorial Center is located on the south end of Bond Academic Center, next to the Study Abroad offices. Tutoring is available by appointment only, may be arranged in person at the Tutorial Center, over the phone at (619) 849 2593, or via email at [TutorialServices@pointloma.edu](mailto:TutorialServices@pointloma.edu).

#### OFFICE HOURS

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It is important to me that I get to know each of you on an individual level, so stop by and say hi! My official office hours (listed above) are tentative—other meetings or appointments may arise—so schedule 24 hours in advance if you have pressing issues, but feel freedom to visit whenever you'd like. I have an open door for questions, nerdy training theory discussions, or if you just need someone to listen and pray for you. I often won't have all the answers, but I'm positive we can figure it out together!

## TENTATIVE COURSE SCHEDULE

Module	Weeks	Day 1: Module Intro, Lecture	Day 2: IRAT/TRAT, TBL
<u>Module 1</u> Neuromuscular & Anatomical Concepts Chapters: 1-3	Week 1	<u>Thursday, 9/5</u> Course Intro, Neuromuscular & Anatomical Concepts Chapters: 1-3 Format: Lecture, Palpation	<u>Tuesday, 9/10</u> Module 1 IRAT/TRAT, team activity Chapters: 1-3 Format: Team-based learning Due: Worksheet 1
<u>Module 2</u> Trunk & Spinal Column Chapters: 11	Week 2	<u>Thursday, 9/12</u> Trunk & Spinal Columns Chapter 11 Format: Lecture, Palpation Due: Video Assignment 1	<u>Tuesday, 9/17</u> Module 2 IRAT/TRAT, team activity Chapters: 11 Format: Team-based learning Due: Worksheet 2, Peer Eval 1
<u>Module 3</u> Shoulder Girdle & Joint Chapters: 4 & 5	Week 3	<u>Thursday, 9/19</u> Shoulder Girdle & Joint Chapters: 4 & 5 Format: Lecture, Palpation Due: Video Assignment 2	<u>Tuesday, 9/24</u> Module 3 IRAT/TRAT, team activity Chapters: 4, 5 Format: Team-based learning Due: Worksheet 3
<u>Module 4</u> Elbow, Wrist, & Hand Chapters: 6 & 7	Week 4	<u>Thursday, 9/26</u> Elbow, Wrist, & Hand Chapters: 6 & 7 Format: Lecture, Palpation Due: Video Assignment 3	<u>Tuesday, 10/1</u> Module 4 IRAT/TRAT, team activity Chapters: 6, 7 Format: Team-based learning Due: Worksheet 4
<u>Module 5</u> Thigh, Hip, & Pelvis Chapters: 8	Week 5	<u>Thursday, 10/3</u> Thigh, Hip, & Pelvis Chapters: 8 Format: Lecture, Palpation Due: Video Assignment 4	<u>Tuesday, 10/8</u> Module 5 IRAT/TRAT, team activity Chapters: 8 Format: Team-based learning Due: Worksheet 5, Peer Eval 2
<u>Module 6</u> Knee Joint Chapters: 9	Week 6	<u>Thursday, 10/10</u> Knee Joint Chapters: 9 Format: Lecture, Palpation Due: Video Assignment 5	<u>Tuesday, 10/15</u> Module 6 IRAT/TRAT, team activity Chapters: 9 Format: Team-based learning Due: Worksheet 6
<u>Module 7</u> Ankle & Foot Chapters: 6 & 7	Week 7	<u>Thursday, 10/17</u> Ankle & Foot Chapters: 10 Format: Lecture, Palpation Due: Video Assignment 6	<u>Tuesday, 10/22</u> Module 7 IRAT/TRAT, Final Exam Chapters: 10 Format: Final Exam Due: Worksheet 7