Kinesiology
EXS 3070
3 Units

Praxis of Strength Training and Conditioning

Meeting Days:	M, W, F	Instructor:	Jacob R. Goodin, Ph.D., CSCS
Meeting Times:	1:30 to 2:25p	Phone:	(619) 849-2254
Meeting Location(s):	KIN 1	Email:	jgoodin@pointloma.edu
Final Exam:	Wed 12/18, 1:30p – 4:00p	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

This course provides an in-depth study of the principles and techniques used to assess health and physical fitness and to design and prescribe exercise programs and physical activities. Concepts of exercise science will be applied to the development **and practice** of strength training and conditioning programs. Students will acquire the knowledge and skills necessary to sit for the NSCA's certification exam—Certified Strength and Conditioning Specialist (CSCS)—or another fitness related certification exam (e.g. ACSM, ACE, NASM). Furthermore, students will leave this class with the knowledge and tools necessary to safely and effectively plan and supervise evidence-based strength training and conditioning plans in a variety of settings.

Prerequisite: KIN 3040.

COURSE LEARNING OUTCOMES

- Demonstrate and analyze proper lifting, sprinting, change-of-direction, plyometric, and stretching technique.
- Explain how energy systems work in our body during exercise and sport.
- Assess and evaluate clients for various components of fitness.
- Design and implement safe and effective strength training, conditioning, and personal training programs by applying exercise prescription principles for training variation, injury prevention, and reconditioning.
- Learn how to provide guidance regarding nutrition and performance-enhancing substances.
- Understand the similarities and differences between training for sport and training for fitness and health.

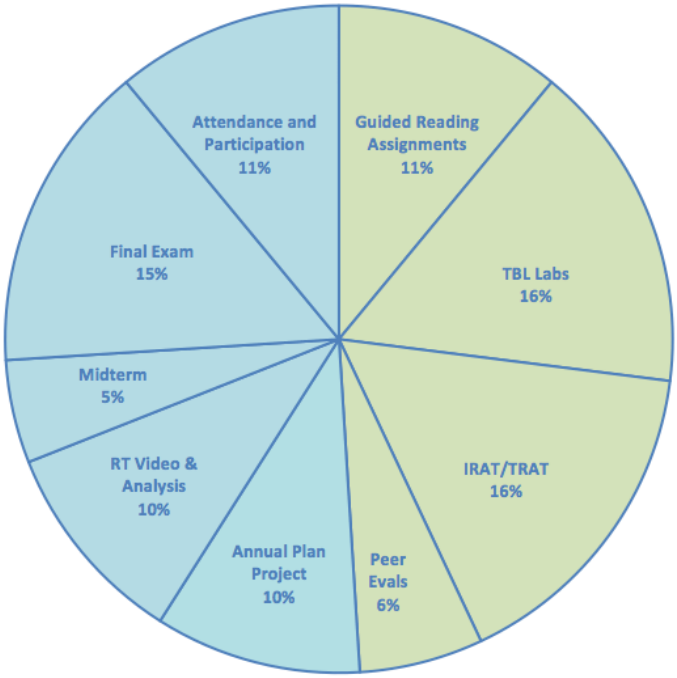
COURSE GRADING AND ASSIGNMENTS

Team-Based Assignments

- Guided Reading Assignments (24 @5pts each): 120pts
- IRAT/TRAT (7 @20pts each): 140pts
- Labs (7 @20pts each): 140pts
- Peer Evaluations (2 @30pts each): 60pts

Individual Assignments

- Annual Plan Project: 100pts
- Resistance Training Video and Analysis: 100pts
- Attendance and Participation (50 @2pts each day): 140pts
- Midterm: 50pts
- Final Exam: 150pts



Total: 1000

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

Note: All assignments are to be submitted electronically via Canvas

1) **Guided Reading Assignments**: A guided reading assignment will be completed for each chapter in the book. Templates for these can be downloaded from Canvas and contain the major headings and subheadings for each chapter. Complete these as a team (Google Docs is helpful) and submit them to Canvas. For each module I will randomly select one team and grade their notes closely. If their notes are complete and thorough, every team that submitted an assignment will receive full points. If not, I will grade every team's work closely, subtracting points for incomplete or sub-par notes. These assignments are intended to introduce students to content that we will build on in class, to cover topics that are on the CSCS exam but that we don't have time to directly address during lecture, and to give

students points for reading that they should be doing already. I will compile these notes to serve as an informal study guide at the end of the semester. See Canvas for example.

2) **Individual Readiness Assessment Test** (**IRAT**): Once per module, an IRAT is 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 lab 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^{st} attempt = 4 pts
     - 2^{nd} attempt = 2 pts
     - 3^{rd} attempt = 1 pts
     - 4^{th} attempt = 0 pts
     - Divide total by 4, and multiply by the percent voted on above
   - No TRAT scores can be dropped.

4) **Team-Based Learning (TBL) Labs**: All labs will consist of an in-class component (Day 1) and an activity component (Day 2). On day 1 students will be given a real-world problem to solve relevant to the lab's topic. The class period will be spent refining various approaches to the problem and will culminate in selecting the best approach. On day 2, students will come dressed for activity, and one team will be chosen to coach the rest of the class through that approach. Students will be graded on their preparedness to engage with the problem on day 1, and on their effort and completion of the coaching/activity during day 2. These labs are intended to give students experiences in creating, coaching, and performing a wide variety of training programs. Day 2 of each lab will be held in either the Sport Performance Center, on the track, at the weight shed, or in the Human Performance Lab. Lab write-ups are due 1 week after day 1 (the following Friday).

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) **Annual Plan Project**: Each student will develop a year-long sport-specific strength and conditioning program for a sport of their choice. Accompanying this program will be a paper with a thorough rationale behind each component of the training plan. The program is to include:
   - A realistic and comprehensive travel, holiday, and competition schedule for your athlete or team
   - Schedules for Off-Season, Pre-Season, In-Season, & Post-Season training, as well as Active Rest periods (i.e. the entire year)
   - Movement drills specific to the sport for warm-up and skill development
   - Weight training exercise program including:
     - Frequency
     - Intensity
     - Sets
     - Reps
     - Exercise selection and variation
     - Rest
     - Volume
     - Energy Systems Training i.e. Conditioning (Phosphagen, Glycolytic, Oxidative)
     - Agility training (if applicable)
     - Correct terminology and sequencing for mesocycles, training blocks, and microcycles
     - A minimum of five (5) reliable, peer-reviewed sources are to be referenced in the paper to support your rationale.
   - This is not a team project. Copying-and-pasting, verbatim explanations, or duplicate programs will be viewed as plagiarism. However, sharing of common methods, templates, and resources is encouraged.
   - An Excel template will be posted in Canvas. This template can be extensively modified to fit your specific athlete or sport, but the basic format (weeks across the top, components of the plan down the left-hand side) should stay the same.
   - See Canvas for examples.

7) **Resistance Training Video and Analysis**: Each student will record themselves performing a variety of exercises from both front and side angles. The following 12 lifts will be performed *in order*:
   - Strength Lifts (3 repetitions @70% 1RM)
     - Barbell back squat (high bar)

    - Barbell front squat
    - Barbell SLDL
    - Barbell bench press
    - Barbell overhead press
    - Barbell bent-over row
- Weightlifting Derivatives (3 repetitions @60% 1RM)
    - Clean pull
    - Snatch pull
    - Hang power clean from the knee
    - Hang power snatch from the knee
    - Power jerk
    - Split jerk

  Each student will use iMovie (or similar technology) to produce a single video with clips for each lift, first from the front, then from the side. Each clip should list the lift performed, the student's 1RM, and the load on the bar (either 60% or 70%). Students will write a brief analysis of each lift (2-4 sentences) that highlights technique errors and gives corrections and cues that could address these errors. Both your 1RM and the calculated percent of your 1RM should be in the heading of each lift analysis. If it is an estimated 1RM, please indicate what RM you estimated based on (i.e. a 3RM, 5RM, etc…) and which chart you used (i.e. Prilepin's chart). See Canvas for examples.

8) **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 3 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.

9) **Midterm & Final Exam**: The midterm & final exam will both resemble the NSCA Practice Exam, which is a comprehensive multiple-choice test. All questions are taken directly from official NSCA practice exams. The final exam will feature two sections with a 10-minute break between each.

REQUIRED TEXTS AND RECOMMENDED RESOURCES

Required:
Haff, GG, and Triplett, NT, eds. *Essentials of Strength Training and Conditioning*, 4th ed. Champaign, IL: Human Kinetics, 2016

Strongly Recommended:
Stone, Stone, and Sands. *Principles and Practice of Resistance Training*. Champaign, IL: Human Kinetics, 2007

Isratel, M., J. Hoffman, and C. W. Smith. *Scientific Principles of Strength Training.* Juggernaut Training Systems (2016).

LATE AND INCOMPLETE ASSIGNMENTS

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

Successful completion of this class requires taking the final examination on its scheduled day. No requests for early examinations or alternative days will be approved.

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

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. See Disability Resource Center for additional information.

PLNU ATTENDANCE AND PARTICIPATION POLICY

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

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.

OFFICE HOURS

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 stop by 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	Day 2	Day 3	Day 4	Day 5	Day 6
Module 1 A&P Review, First Principles Chapters: 1-4, 14	Weeks 1 & 2	Monday, 9/2 Labor Day	Wednesday, 9/4 Scientific Principles of Training Chapters: Format: Module Intro, Lecture	Friday, 9/6 Biomechanics & Exercise Phys Basics Chapters: 1-4 (skim) Format: Lecture, Discussion	Monday, 9/9 Module 1 IRAT/TRAT Chapters: 1-4 Format: IRAT/TRAT Due: Guided Reading 1, 2, 14	Wednesday, 9/11 Lab 1: Warm-up Techniques Chapters: 14 Format: TBL Lab Day 1 (class)	Friday, 9/13 Lab 1: Warm-up Techniques Chapters: 14 Format: TBL Lab Day 2 (activity)
Module 2 Aerobic Training Chapters: 6, 20	Weeks 3 & 4	Monday, 9/16 Adaptations to Aerobic Training Chapters: Format: Module Intro, Lecture	Wednesday, 9/18 Adaptations to Aerobic Training Chapters: 6 Format: Lecture, Discussion	Friday, 9/20 Program Design for Endurance Training Chapters: 20 Format: Lecture, Discussion Due: Lab 1	Monday, 9/23 Module 2 IRAT/TRAT Chapters: 6, 20 Format: IRAT/TRAT Due: Guided Reading 3, 6, 20	Wednesday, 9/25 Lab 2: Aerobic Training Chapters: 20 Format: TBL Lab Day 1 (class)	Friday, 9/27 Lab 2: Aerobic Training Chapters: 20 Format: TBL Lab Day 2 (activity)
Module 3 Anaerobic Training Chapters: 5, 15-17	Weeks 5 & 6	Monday, 9/30 Resistance Training Technique Chapters: Format: Sport Perf. Center	Wednesday, 10/2 Adaptations to Anaerobic Training Chapters: 5 Format: Lecture, Discussion	Friday, 10/4 Program Design for Resistance Training Chapters: 17 Due: Lab 2	Monday, 10/7 Module 3 IRAT/TRAT Chapters: 5, 15-17 Format: IRAT/TRAT Due: Guided Reading 5, 15-17	Wednesday, 10/9 Lab 3: RT Programming & Technique Chapters: 5, 15-17 Format: TBL Lab Day 1 (class)	Friday, 10/11 Lab 3: RT Programming & Technique Chapters: 5, 15-17 Format: TBL Lab Day 2 (activity) Due: Peer Eval 1
Module 4 Nutrition & Sport Psychology Chapters: 8-11	Weeks 7 & 8	Monday, 10/14 Nutrition Strategies for Performnce Chapters: Format: Module Intro, Lecture	Wednesday, 10/16 Nutrition Strategies for Performance Chapters: 10 Format: Lecture, Discusson	Friday, 10/18 Performance-Enhancing Substances Chapters: 11 Format: Lecture, Discussion Due: Lab 3	Monday, 10/21 Sport Psychology Chapters: 8 Format: Lecture, Discussion	Wednesday, 10/23 Module 4 IRAT/TRAT Chapters: 8-11 Format: IRAT/TRAT Due: Guided Reading 8-11	Friday, 10/25 Fall Break Lab 4: Nutrition & Sport Psychology Format: online TBL lab
Module 5 Plyometric and Speed Training Chapters: 18 & 19	Weeks 9 & 10	Monday, 10/28 Intro to Plyometrics and Speed Chapters: Format: Module Intro, Lecture	Wednesday, 10/30 Program Design for Plyometric Training Chapters: 18	Friday, 11/1 Program Design for Speed Training Chapters: 19 Format: Lecture, Discussion Due: Lab 4 (online)	Monday, 11/4 Module 5 IRAT/TRAT Chapters: 18, 19 Format: IRAT/TRAT Due: Guided Reading 4, 18, 19	Wednesday, 11/6 Lab 5: Plyo & Speed Programming Chapters: 18, 19 Format: TBL Lab Day 1 (class)	Friday, 11/8 Lab 5: Plyo & Speed Programming Chapters: 18, 19 Format: TBL Lab Day 2 (activity)
Module 6 Periodization Chapters: 7, 21	Weeks 11 & 12	Monday, 11/11 Intro to Periodization Chapters: Format: Module Intro, Lecture	Wednesday, 11/13 History of Periodization Chapters: 21 Format: Lecture, Discussion	Friday, 11/15 Application of Periodization Chapters: 21 Format: Lecture, Discussion Due: Lab 5	Monday, 11/18 Module 6 IRAT/TRAT Chapters: 21 Format: IRAT/TRAT Due: Guided Reading 7, 21, 22	Wednesday, 11/20 Lab 6: Adv. Resistance Training Methods Format: TBL Lab Day 1 (class)	Friday, 11/22 Lab 6: Adv. Resistance Training Methods Format: TBL Lab Day 2 (activity) Due: Peer Eval 2
Module 7 Athlete Testing & Monitoring Chapters: 12, 13	Weeks 12 & 13	Monday, 11/25 Lab 6: Adv. Resistance Training Methods Format: TBL Lab Day 3 (activity)	Wednesday, 11/27 Thanksgiving	Friday, 11/29 Thanksgiving	Monday, 12/2 Intro to Athlete Testing & Monitoring Chapters: Format: Module Intro, Lecture Due: Lab 6, RT Video & Analysis	Wednesday, 12/4 Test Selection, Administration Chapters: 12, 13 Format: Lecture, Discussion	Friday, 12/6 Athlete Testing & Monitoring Chapters: 12, 13 Format: Lecture, Discussion
Module 7 (cont.) Athlete Testing & Monitoring Chapters: 12, 13	Weeks 14 & 15	Monday, 12/9 Module 7 IRAT/TRAT Chapters: 12, 13 Format: IRAT/TRAT Due: Guided Reading 12, 13, 23, 24	Wednesday, 12/11 Lab 7: Athlete Testing & Monitoring Chapters: 12, 13 Format: TBL Lab Day 1 (activity)	Friday, 12/13 Lab 7: Athlete Testing & Monitoring Chapters: 12, 13 Format: TBL Lab Day 2 (activity)	Monday, 12/16 No Class (Finals Week)	Wednesday, 12/18 Final Exam (CSCS Practice Exam) Chapters: 1-24 Format: Multiple Choice Exam Due: Lab 7, Annual Plan Project	Friday, 12/20 No Class (Finals Week)