PEP 478/579 Sports Physiology
Department of Health, Exercise and Sports Sciences

Instructor:	Len Kravitz, Ph.D.
Meeting Times:	TTH 11:00 am – 12:15 pm: Johnson Center 154
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Email:	**lkravitz@unm.edu**
Web Site:	www.unm.edu/~lkravitz (UNM Quick Links > Sports Physiology)
Office Hrs:	Mon/Wed 2:00 to 4:30 pm
Prerequisites:	**REQUIRED PEP277, PEP326L, PEP426, PEP470 (May take concurrently)**

Course Description:
Sport physiology is concerned primarily with how underlying mechanisms can be manipulated by variations in training to produce specific performance enhancements.

Rationale:
The initial study of exercise physiology requires the student to have prior competency in basic exercise physiology. Emphasis in this course utilizes this information to focus on how the body (and its systems) responds to the differing types of metabolic, anaerobic and cardiovascular intensities of exercise. For students who wish to pursue further studies in sports physiology, a thorough mastery of this fundamental information is extremely important and provides the foundation for more advanced study in exercise bioenergetics, biochemistry and physiology.

This course is closely associated with the College of Education Mission in "the study and practice of education through teaching, research, and service." It is the goal of the Exercise Science Program and College of Education to "prepare students for participation in a complex and challenging society." The mission of the College of Education is posted at: coe.unm.edu (click on About COE; then click COE Guiding documents)

Course Objectives:
1. Provide a background of knowledge of sports physiology that translates into athletic performance and/or optimal health
2. Advocate for using a scientific approach to address issues surrounding athletic performance
3. To acquire an appreciation of research in sports physiology research (by doing a study)

Textbook: No Textbook
Each topic will have directed readings, which will be posted on our Sports Physiology WEB page

Instructional Strategies
The instructor will use the following strategies during the course of instruction:
Multi-media lecture presentations
Multi-media oral/written quizzes
Web-based study; class discussion
Demonstrations and laboratory experiences

Evaluation:

Exam 1	15 pts
Exam 2	15 pts
Exam 3	10 pts
VO2 Max Project	10 pts
Ergogenic Aids Presentation	5 pts
Research Study Presentation	5 pts
Final Exam	10 pts
Quizzes (Ave)	15 pts
Lab Reports (Average of 3)	15 pts

Quizzes: Daily quizzes. This is support for formative evaluation, which has been shown to improve final student outcomes significantly.

Note: No make-ups on exams, quizzes or labs without WRITTEN medical or equivalent excuse (such as athletic team away game, scheduled wedding, special event, etc.). All authorized absences should be requested in advance! Approved make-ups must be completed within 2 class meetings.

Note 2: For the VO2max project, ergogenic aids presentation, and research study presentation you will be working in a group of 3 (same students for all groups).

Grading Scale

97 — 100	A+	73 — < 77	C
93 — < 97	A	70 — < 73	C-
90 — < 93	A-	67 — < 70	D+
87 — < 90	B+	63 — < 67	D
83 — < 87	B	60 — < 63	D-
80 — < 83	B-	< 60	F
77 — < 80	C+		

Academic Integrity: Academic dishonesty defined from the UNM Student Code of Conduct: "dishonesty in quizzes, tests or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records." The Exercise Science faculty supports the importance of academic integrity. A student violating academic dishonesty guidelines will receive an "F" for the course. A second violation will result in the student being withdrawn from the Exercise Science program.

Lab Reports: For each lab report, students will turn in a lab report. Laboratory Reports are NOT group projects. DO YOUR OWN WORK on these assignments. Specific handout directions will be provided with each laboratory experience. Laboratory reports are due on the date specified. No late papers will be accepted. Students must be present at labs to receive credit for the report.

Special Needs: Qualified students with special needs should see the instructor as soon as possible.

Professional Courtesy: Students are expected to be on time for class and stay till the end of class. No food or drinks (other than water bottles) in class. Also, take care of your personal needs before the beginning of class. As well, I expect you to show professional courtesy towards your fellow students (i.e., no feet on chairs or pack packs in the way of others). **CELL PHONE USAGE** policy:
In accordance with the Dean of Students office, the Department of Physical Performance and Development will not tolerate the use of cell phones, pagers, or other electronic devices in the classroom. Using cell phones, pagers, or other electronic devices in the classroom "is disruptive student behavior that interferes with the educational process of other students or prevents faculty or staff from performing their professional responsibilities". Please bring a calculator to class for calculations.

Laboratory Attire: All students should wear comfortable workout gear for the laboratory experiences.

Laboratory Reports: Laboratory reports are due on the date specified. No late papers will be accepted. Students must be present at labs to receive credit for the report.

Scholarly Questions, Analytical Thinking: Daily study questions and quizzes will be posted on the web site that are intended to help students prepare for the exams. www.unm.edu/~lkravitz (go to UNM then go to Sports Physiology). The scholarly questions and analytical thinking section is directly from lecture.

Tentative Topics, Lectures, and Labs Timeline
Anaerobic metabolism and conditioning

Hypertrophy and strength conditioning
Exam 1
Cardiovascular physiology and conditioning
Cardiovascular training and anaerobic conditioning for weight loss (issues and controversies)
Overtraining; Excess Post-Exercise Oxygen Consumption
Exam 2
Power lifting and kettlebell training
Gait analysis laboratory experience
Ergogenic aid presentations
Maximal lactate threshold laboratory experience
Training youth and masters athletes
Isokinetic laboratory experience
Research study presentations
Exam 3

VO2 Max Project. You will be working in groups 3
It is the goal of this class that every student complete and experience a VO2 max test
1) **Day/times for PE-P 478/579 VO2 max testing: Monday 1:30 to 3:30 pm; Wed 4:00 pm to 6 pm.**
2) Your group must choose ONE modality: Either Treadmill or Cycle Ergometer
3) On the day of your test make sure you are have not had anything to eat 2 hours prior to your test
4) Each of you will help Jeremy McCormick and/or Jen Roper administer the test when not doing it
5) For the second part of the project you will to the ROCKPORT WALK estimation of VO2 max, and the 1.5 Mile Run/Walk Test, and a multiple regression estimation equation of VO2 max (Protocols on these tests will also posted on the Sports Physiology WEB page)
6) Dr. Kravitz will provide a template for writing up your INDIVIDUAL comparisons of these tests

Research Study Project/Presentation with your group
Using your OWN resources (i.e, UNM weight room or fields, scale, tape measure, stop watch, etc.)
1) Determine ONE question you want to test in a 4-week study. Example Push-up Study Question; Does doing handstand wall push-ups improve the number of pushups you can perform?
2) All members of the group must do the 4-week study
3) You will do a Pre-Test and Post-Test of this study using your own resources. Example Push-up Study Pre- and Post-test will be push-ups on a floor mat with a specific body posture and tempo
4) You will determine the training intervention (days/times) and progression of your study (Example Push-up training intervention is 3 sets of handstand wall push-ups (with a spotter) on
5) You will determine any exclusion variables. Example Push-up Study exclusion variable might be no heaving upper body training during the 4-week study
6) You will present your study to the class and a 300-word abstract will be submitted to Dr. Kravitz
7) Specific presentation format, abstract writing format, and grading rubric to be presented by Dr. Kravitz

Ergogenic Aids Presentation: Dr. Kravitz will provide on separate cover