

Eastern Illinois University  
Department of Kinesiology and Sports Studies

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**PED 4900 – Exercise in Extreme Conditions – 1 credit hour**

Syllabus for Fall 2017

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Instructor: Jake Emmett, Ph.D.

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Email: D2L email (primary), [jemmett@eiu.edu](mailto:jemmett@eiu.edu) (secondary)

Office Hours: Mon. and Wed., 10:00-11:00. Tue. and Thur., 9:00-10:00. Or by appointment.

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**Course Description:**

This course provides an overview of the acute and chronic adaptations of the human body during exercise under extreme conditions or circumstances.

**Objectives:**

1. Understand the additional stresses to the body from extreme environmental factors such as hot, cold, hyperbaric, and hypobaric conditions.
2. Understand how the acute responses to the body during exercise differ during exercise in extreme conditions compared to neutral conditions.
3. Understand chronic physiological adaptations that occur during exercise training in extreme conditions.
4. Understand the limitations of the human body to perform in extreme conditions and the related health risks.

**Course Content:**

1. Exercise in the Hot and Cold Environments
  1. Body Temperature Regulation
  2. Physiological Responses to Exercise in the Heat
  3. Health Risks During Exercise in the Heat
  4. Acclimation to Exercise in the Heat
2. Exercise at Moderate to High Altitude
  1. Environmental Conditions at Altitude
  2. Physiological Responses to Acute Altitude Exposure
  3. Exercise and Sport Performance at Altitude
  4. Acclimation: Chronic Exposure to Altitude
  5. Altitude: Optimizing Training and Performance
  6. Health Risks of Acute Exposure to Altitude
3. Exercise in Cold Conditions
  1. Exercise in the Cold
  2. Physiological Responses to Exercise in the Cold

### 3. Health Risks During Exercise in the Cold

#### Tentative Schedule

Monday		Tue	Wednesday	Thu	Fri
Aug 21	Introduction		Heat Exchange		
Aug 28	Temperature Regulation		Heat Illnesses		
Sep 4	<i>Labor Day</i>		Prevention		
Sep 11	Acclimation		Hydration		
Sep 18	<b>Exam 1</b>		Altitude		
Sep 25	Acute Responses		Adaptations		
Oct 2	Live High, Train Low		Illnesses		
Oct 9	Cold		<b>Exam 2</b>		

**Text:** None. Supplemental reading material will be provided. Access to a current exercise physiology textbook is recommended.

#### Assignments:

- Quizzes (5 points each). Quizzes will given in class (unannounced) and online through D2L. They cannot be made up without an official excuse.
- Assignments (5-10 points). Assignments will be given through D2L and will cover topics and material to be studied on your own in preparation for class discussion. Check D2L for due dates.
- Exams (2 exams, 50 points each). Exams will given online and will be a random selection of short answer, multiple choice, matching, fill-in-the-blank, and true-false questions. Exams are open note, open book but they are time limited and you will not be able to skip questions. Therefore, the better you know the material before hand and the less time you will spend per question, the better you will do on the exam.

#### Grading

- A  $\leq$  90% of total points
- B 80-89% of total points
- C 70-79% of total points
- D 60-69% of total points
- F < 60% of total points

Note: This course requires the use of LockDown Browser for online exams. Watch this [short video](#) to get a basic understanding of LockDown Browser.

**Then download and install LockDown Browser from this link:**

<https://www.respondus.com/lockdown/download.php?id=134612535> (Note: This link is specific to EIU.)

**To take a practice quiz using LockDown Browser, do the following:**

- Start LockDown Browser, log into D2L (<http://www.eiu.edu/d2l>), and select the "D2L Student Orientation" course.
- Locate the practice quiz named "Respondus Lockdown Browser Sample Quiz- Requires Respondus LockDown Browser" located under "Assessments > Quizzes" in the D2L Student Orientation.
- Upon completing and submitting the practice quiz, exit LockDown Browser.

**To take an online test,**

Start LockDown Browser and navigate to the exam. (You won't be able to access the exam with a standard web browser.) For additional details on using LockDown Browser, review this Student Quick Start Guide (PDF).

Finally, when taking an online exam, follow these guidelines:

- Ensure you're in a location where you won't be interrupted
- Turn off all mobile devices, phones, etc.
- Clear your desk of all external materials — books, papers, other computers, or devices
- Remain at your desk or workstation for the duration of the test
- LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted.

## **Course Policies:**

- **Academic integrity** - Students are expected to maintain principles of academic integrity and conduct as defined in EIU's Code of Conduct (<http://www.eiu.edu/judicial/studentconductcode.php>). Violations will be reported to the Office of Student Standards.
- **Students with disabilities** - If you are a student with a documented disability in need of accommodations to fully participate in this class, please contact the Office of Student Disability Services (OSDS). All accommodations must be approved through OSDS. Please stop by Ninth Street Hall, Room 2006, or call 217-581-6583 to make an appointment.
- **The Student Success Center** - Students who are having difficulty achieving their academic goals are encouraged to contact the Student Success Center ([www.eiu.edu/~success](http://www.eiu.edu/~success)) for assistance with time management, test taking, note taking, avoiding procrastination, setting goals, and other skills to support academic achievement. The Student Success Center provides individualized consultations. To make an appointment, call 217-581-6696, or go to 9<sup>th</sup> Street Hall, Room 1302.