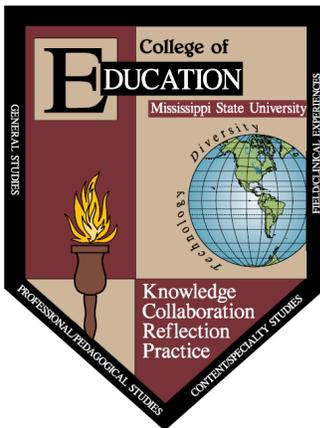


**MISSISSIPPI STATE UNIVERSITY
COLLEGE OF EDUCATION**

**DEPARTMENT of KINESIOLOGY
COURSE SYLLABUS**

Course Prefix & Number:	EP 8283
Course Title:	Environmental Exercise Physiology
Credit Hours:	Three (3) semester hours
Course Type:	Lecture
Catalogue Description:	Advanced principles and applications in exercise physiology including responses to acute exercise and chronic training in the heat, cold, and at high and low pressures.

College of Education Conceptual Framework:



The faculty in the College of Education at Mississippi State University are committed to assuring the success of students and graduates by providing superior learning opportunities that are continually improved as society, schools, and technology change. The organizing theme for the conceptual framework for the College of Education at Mississippi State University is educational professionals - dedicated to continual improvement of all students' educational experiences. The beliefs that guide program development are as follows:

1. **KNOWLEDGE** - Educational professionals must have a deep understanding of the organizing concepts, processes, and attitudes that comprise their chosen disciplinary knowledge base, the pedagogical knowledge base, and the pedagogical content knowledge base. They must also know how to complement these knowledge bases with the appropriate use of technology.
2. **COLLABORATION** - Educational professionals must continually seek opportunities to work together, learn from one another, forge partnerships, and assume positions of responsibility.
3. **REFLECTION** - Educational professionals must be willing to assess their own strengths and weaknesses through reflection. They must also possess the skills, behaviors, and attitudes necessary to learn, change, and grow as life-long learners.
4. **PRACTICE** - Educational professionals must have a rich repertoire of research-based strategies for instruction, assessment, and the use of technologies. They must be able to focus that array of skills on promoting authentic learning by all students or clients, while exhibiting an appreciation and commitment to the value and role of diversity.

Course Objectives:

1. To raise your level of knowledge on fundamental topics in environmental exercise physiology above what is typically taught at the undergraduate level CFPO #3
2. To gain experience in reading and summarizing original research articles and scholarly reviews in exercise physiology CFPO #3, 4
3. To improve your ability to read and interpret research, and to appreciate ambiguities in the literature and the limits of current knowledge. CFPO #3, 4
4. Formulate research questions and experiments to test principles of environmental exercise physiology CFPO #3

Topics to be Covered:

1. An Introduction to Environmental Exercise Physiology: Review of environmental factors and human limitations (3 hours)
2. Physiological Toughness: Concepts of physiological adaptation to different types of stressors (3 hours)
3. Temperature Regulation: Physiological adaptations to heat and cold, thermoregulatory mechanisms (12 hours)
4. Swimming and Diving Physiology: Physiological responses to water environments, physical work capacity in hot and cold water, gas laws related to diving (6 hours)
5. Altitude Physiology: Physiological responses to altitude demands at different elevations, physical work capacity, fatigue and its evaluation, endurance in physical work at different elevations (12 hours)
6. Pollution: Health and performance in different types of pollutions – noise, air, water, visual and assessment of countermeasures and questions in methodological issues in studying pollution (3 hours)
7. Circadian Rhythms : Shift organization and patterns, effects of shift work on workers, effects of jet lag and sleep deprivation on performance, countermeasures to circadian rhythm disturbances applications and discussion (6 hours)

Textbooks:

Cheung, S.S. (2010). *Advanced environmental exercise physiology*. Champaign, IL: Human Kinetics. **Required**

Reilly, T. & Waterhouse, J. (2005). *Sport, exercise, and environmental physiology*. New York: Elsevier. **Recommended**

Methods of Instruction:

1. Lecture (Objectives 1-8)
2. Class Discussion (Objectives 1-8)
3. Lab activities (Objectives 1-8)

Suggested Student Activities:

1. Attend all lectures and participate in classroom discussions (Objectives 1-8)

2. Complete all lab activities (Objectives 1-8)
3. Read appropriate chapters in the textbook and supplementary reading materials (Objectives 1-8)
4. Complete the end of semester project (Objectives 1-8)
5. Be prepared for all lectures, quizzes, and exams. If you are struggling with a topic, please see the professor as soon as possible (Objectives 1-8)

MSU Honor Code:

Mississippi State University has an approved Honor Code that applies to all students. The code is as follows:

“As a Mississippi State University student I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do.”

Upon accepting admission to Mississippi State University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor Code. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the MSU community from the requirements or the processes of the Honor Code. For additional information please visit:

<http://www.msstate.edu/dept/audit/1207A.html>.

Honesty and integrity are expected of every student. All occurrences of academic misconduct will be dealt with in accordance with the guidelines and procedures outlined in the Academic Misconduct Policy. Additional university policies related to students can be accessed at:

http://www.msstate.edu/web/student_policies.html .

Technology:

Laboratory instruments such as the metabolic cart, various ergometers and dynamometers will be used in this course.

Diversity:

Will be addressed through use of examples of sex differences in exercise responses and adaptations discussed in class.

Disability statement:

It is the policy of Mississippi State University to accommodate students with special needs and learning disabilities as per the MSU Student Support Services policy. Students seeking accommodations on the basis of a disability or special need must identify themselves to the Office of Student Support Services (325-3335) to verify eligibility. Additional documentation guidelines may be obtained by contacting the Office of Student Support Services directly, or via the web at <http://www.msstate.edu/dept/audit/91130.html>. Academic accommodations and services are based upon an individual's needs. All documentation is confidential.

Field Component: This course does not have a field component.

Evaluation of Student Progress:

	Total Points = 500
Two exams (includes the final exam)	200 points
Assignments	200 points
Research Proposal	100 points

Grading Scale: A = 90 - 100%, B = 80 - 89, C = 70 - 79, D = 60 - 69, F = 59 - below

Project: Students will work individually on a research proposal. Each student will choose a specific details of the proposal will be covered in class and examples will be posted on the class website. Each student will present the proposal to the class at the end of the semester.

Exams: Exams will consist of short answer and essay questions. There will be two exams given throughout the semester, including a comprehensive final exam.

Bibliography:

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