

**KSS 4900-Special Topics in Exercise Physiology: Pharmacology
Fall 2009**

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Office: 1116 O'Brien Stadium (Athletic Training Room)
Office Hours: By appointment

Class Time: Tuesday 8-8:50

Text: No text is required; however, all students should have *Arnheim's Principles of Athletic Training: A Competency-Based Approach* (Eleventh Edition) by William Prentice available for reference.

Course Description:

This course will provide an overview of the general concepts of pharmacology (the study of drugs); the uses of non-prescription, prescription, and classified pharmaceuticals; and the effects of drugs (including performance-enhancement drugs) as they relate to physically active individuals.

Course Overview:

This course will examine the general concepts of pharmacology and pharmacokinetics as they relate to the immediate and ongoing care of injuries and illnesses in sports medicine and athletic training. Areas will include general indications, contraindications, and adverse reactions of commonly used prescription and non-prescription drugs, including: anti-inflammatory medications (steroidal and nonsteroidal), analgesics, local anesthetics, bronchodilators and other respiratory medications, antibiotics, beta-blockers and hypertensives, and performance-enhancing drugs.

Course Objectives:

By the end of the semester, the student will be able to:

1. Recognize the general concepts of pharmacology and pharmacokinetics.
2. Identify situations that may require prescription and non-prescription medications for treating certain symptoms associated with illness and injury.
3. Explain general indications, contraindications, and adverse reactions of commonly used prescription and non-prescription drugs.
4. Recognize how both prescription and non-prescription medications may affect athletic performance.
5. Provide general health information to physically active individuals regarding the use of prescription and non-prescription medications.
6. Follow federal, state, and local regulations regarding storage, transportation, dispensing, and recording medications.

Course Outline:

1. Introduction and Management of Pharmacology
2. Pharmacodynamic and Pharmacokinetic Principles
3. Drugs for Treating Inflammation
4. Drugs for Treating Pain
5. Drugs for Treating Gastrointestinal Disorders
6. Drugs for Treating Colds and Allergies
7. Drugs for Treating Asthma
8. Drugs for Treating Infections
9. Drugs for Treating Diabetes, Seizures, ADD
10. Drugs for Treating Hypertension and Heart Disease
11. Performance Enhancing Drugs
12. Drug Testing

Course Evaluation:

1. Quizzes (10 points each)- A quiz will be given each week on the previously covered material.
2. Article reviews (20 points)- An article reviews from a sports medicine journal that discusses the use of drugs (nonprescription, prescription, performance-enhancing).
3. Midterm Examination
4. Final Examination

Grading:

The final grade will be based on the following scale from the total points accumulated:

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = Below 59%

Attendance:

Attendance is required at each class. If you are going to be traveling with a team, please let me know in advance so that you can make up the quiz.

General Course Outline

Aug. 25	Syllabus and Class Overview
Sept 1	Introduction to Pharmacology and Management in the Athletic Training Room
Sept. 8	Pharmacodynamic and Pharmacokinetic Principles
Sept. 15	Drugs for Treating Inflammation
Sept. 22	Drugs for Treating Pain
Sept. 29	Drugs for Treating Gastrointestinal Disorders

Oct. 6	Drugs for Treating Cold and Allergies
Oct. 13	Midterm
Oct. 20	Drugs for Treating Asthma
Oct. 27	Drugs for Treating Infections
Nov. 3	Drugs for Treating Diabetes, Seizures, ADD
Nov. 10	Drugs for Treating Hypertension and Heart Disease
Nov. 17	Performance Enhancing Drugs Article Review Due
Nov. 24	No Class – Thanksgiving Break
Dec. 1	Drug Testing and Review
Dec. 14	Final Exam

Article Review Outlines

Article Review Due:
November 17

Guidelines:

- Must be from a sports medicine journal no earlier than 2002 (examples: The Physician and Sportsmedicine, Journal of Athletic Training, American Journal of Sports Medicine, etc.) Most of these should be available either on-line or through the library.
- Topics limited to prescription drugs, non-prescription drugs (OTC's), or performance-enhancing drugs only.
- Must include a copy of the article.
- Minimum of two pages typed, double space, 12-point font (Times New Roman).
- Should include article summary and paragraph on how it directly relates to your future profession in working with physically active individuals.