



MCKENDREE UNIVERSITY

The mission of McKendree University is to provide a high-quality educational experience to outstanding students.

~Responsible Citizenship ~Engagement ~Academic Excellence ~Lifelong Learning~

ATH 200 Medical Terminology (3)

Students will learn and recognize word roots, prefixes, and suffixes used in medical language today. They will learn how to combine words to create meaningful medical conditions as well as comprehend their definition and know the correct spelling. This course will cover medical terms related to all major body systems, including muscular system, skeletal system, respiratory system, circulatory system, digestive system, reproductive system, and urinary system.

Student Learning Outcomes

Students will:

1. Describe the fundamental word elements used to build medical terms.
2. Identify and give the meaning of selected prefixes that pertain to position or placement, numbers and amounts, and those that are descriptive and used in general.
3. Identify and give the meaning of selected word elements that pertain to weights and measures.
4. Describe the normal structures and functions of the body systems
5. Describe the normal anatomical systemic, and physiological changes across the lifespan
6. Describe concepts of body movement such as osteokinematics and arthrokinematics
7. Describe the basic principles of diagnostic imaging and testing
8. Identify and give the meaning of selected suffixes that pertain to pathologic conditions, those used in diagnostic and surgical procedures, and those that are used in general.
9. List three guidelines that will assist you with the identification and spelling of medical words.
10. Identify and give the meaning of selected word elements that pertain to color.
11. Analyze, build, spell, and pronounce selected medical words.

Course Topics

1. Direction terms
2. Quadrants
4. Tissues and bones
5. Respiratory system, parts, normal function, disease,
6. GI system, parts, normal function, disease
7. All body systems, parts, normal function, disease, injury, illness, diagnosis, treatment
8. Diagnostic tools
9. Treatments



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ATH 349 Physiology of Exercise (3)

An examination of the effects of muscular activity on the various systems of the body. Special emphasis on nutrition, energy expenditure, training, performance, environmental stress, and body composition.

Student Learning Outcomes

Students will:

1. Describe current guidelines for proper hydration and explain the consequences of improper fluid/electrolyte replacement for pre-activity, activity, and recovery.
2. Describe the role of exercise in maintaining a healthy lifestyle and preventing chronic disease.
3. Administer and interpret fitness tests to assess a client's/patient's physical status and readiness for physical activity.
4. Explain how changes in the type and intensity of physical activity influence the energy and nutritional demands placed on the client/patient.
5. Assess body composition by validated techniques to determine a client's/patient's health status and to monitor changes related to weight management, strength training, injury, disordered eating, menstrual status, and/or bone density status.
6. Design a fitness program to meet the individual needs of a client/patient based on the results of standard fitness assessments and wellness screening.

Course Topics

1. The Warm Up
2. Energy Production Sample Scenario due in Class
3. Anaerobic Metabolism during Exercise and Wingate Anaerobic Test Calculation
4. Aerobic Metabolism during Exercise, caloric cost of activity, METs and walking calculations
5. Metabolic Training Principles & Adaptations Ch. 5 assignment due on Brightspace
6. Nutrition for Fitness and Athletics
7. Body Composition
8. Weight Loss
9. Body fat calculations, body composition and weight loss
10. Fitness Plan
11. Respiration
12. Respiratory Exercise Response, Training Adaptations & Special Considerations
13. Cardiovascular System
14. Responses to Exercises
15. Training Principles and Adaptations
16. Treadmill, upper arm ergometer, leg cycle
17. Thermoregulation
18. Muscular Training Principles & Adaptations
19. Neuroendocrine Control of Exercise and Kahoot Review
20. Immune System, Exercise Training and Illness



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ATH 453 Pharmacology for Athletic Trainers (3)

This course will introduce students to the general principles of pharmacology. Indications, contraindications, allergies, precautions of use, adverse side effects as they relate to physical exercise, dose information, and information for prescription and non-prescription drugs will be addressed.

Student Learning Outcomes

Students will:

1. Recognize signs and symptoms of toxic drug overdose
2. Recognize general concepts and differences in legal regulation of non-prescription, prescription and classified pharmaceuticals
3. Recall and access laws regulations and procedures that govern storage, transportation, dispensation and recording of prescription and non-prescription medications
4. Administer medications or therapeutic agents through appropriate route of administration
5. Identify role of FDA in approving and recalling drugs
6. Identify appropriate terminology
7. Identify common resources, as well as, identification of common methods used to administer medication
8. Educate patients regarding appropriate pharmacological agents for the management of their condition, include indications, contraindication, dosing, interactions and adverse reactions.
9. Describe how physical activity may influence a drug's therapeutic effect
10. Illustrate general concepts of dissolution, bioavailability, and bioequivalence
11. Describe general indications, contraindications, and adverse reactions of prescription and non-prescription anti-inflammatory, antiarthritic, analgesics, local anesthetics, bronchodilators, antibiotics, anaphylaxis, gastrointestinal, beta-blockers, and antihypersensitives and topical applications
12. Identify usage pattern, general effects and adverse short and long term reactions of performance enhancing drugs
13. Educate patients about the effects and risks of alcohol, tobacco, performance-enhancing drugs, OTC, prescription and recreational drugs

Course Topics

1. Historical and legal Issues / Pharmacokinetics & Pharmacodynamics/ Recognition and Rules
 - a. Anti-Inflammatory Medications / Skeletal Muscle-Relaxant drugs
 - b. Drugs for diabetes Mellitus / Drugs for Cardiovascular Arrhythmias/Hypertension
 - c. Respiratory Drugs / Drugs for Gastrointestinal Disorders
 - d. Drugs for Bacterial, Viral and Fungal Infections/ Analgesics & Local Anesthetics
2. Muscle Building agents
3. Stimulants
4. Natural and Ergogenic
5. Supplements
6. Social Drugs



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ATH 455 Concepts of Resistance Training (3)

Study of the application of principles of anatomy, physiology, and exercise physiology in the recommended resistance exercises for the improvement in health and athletic performance. This course also serves as preparation for those students interested in sitting for the CSCS exam given by the NSCA Certification Commission. Students must register and take either an ACSM and/or the NSCA-CSCS exam (additional cost for each exam registration). Successfully passing the exam leads to certification. Same as PED 455.

Student Learning Outcomes

Students will:

1. Apply scientific knowledge to train athletes and clients for the primary goals of improving athletic performance and fitness.
2. Learn how to conduct sport-specific testing sessions.
3. Learn how to demonstrate and teach proper exercise techniques.
4. Learn how to design and implement safe and effective strength training and conditioning and personal training programs.
5. Learn how to provide guidance regarding nutrition and performance-enhancing substances.
6. Apply exercise prescription principles for training variation, injury prevention, and reconditioning.

Course Topics

1. Movement practice.
2. Strength plan
3. Equipment
4. Scientific knowledge to train athletes and clients
5. Primary goals of improving athletic performance and fitness.
6. Sport-specific testing sessions.
7. Teach proper exercise techniques.
8. Design and implement safe and effective strength training and conditioning and personal training programs.
9. Provide guidance regarding nutrition.
10. Performance-enhancing substances.
11. Exercise prescription principles for training variation,
12. Injury prevention
13. Reconditioning