

Montgomery County Community College
 ESW 222
 Applied Kinesiology
 3-3-0

COURSE DESCRIPTION:

This course is designed to introduce the student to the basic fundamentals of human movement, structural characteristics, articulations, and muscular actions around the major joints. The student will apply the basic anatomical and physical principles of human motion, the principles of biomechanics and the theory of neuromuscular action used in motor skills for occupational, daily living activities, and fitness across the lifespan. Upon completion of the course, the student will be able to fully analyze joint actions and muscles involved in multi-joint exercises or sport movements. In addition, the student will be able to identify and recommend exercises to enhance performance based on appropriate muscular analysis.

REQUISITES:*Previous Course Requirements*

- BIO 129 Functional Human Anatomy and Physiology Or BIO 131 and 132 Human Anatomy and Physiology I and II

Concurrent Course Requirements

None

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Analyze joint structure and function.	Open Discussions Individual and Small Group Paper Presentations Internet Searches Written Assignments Written Examinations Qualitative Movement Analysis Video creation	Exams Movement Analysis Final Project Video creation
2. Analyze muscular function.	Open Discussions Individual and Small Group Paper Presentations Internet Searches Written Assignments Written Examinations Qualitative Movement Analysis Video creation	Exams Movement Analysis Final Project Video creation

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
3. Select appropriate exercises and exercise progressions to improve strength and ease of movement in occupational, daily living, sport and exercise settings across the lifespan.	Open Discussions Individual and Small Group Paper Presentations Internet Searches Written Assignments Written Examinations Qualitative Movement Analysis Video creation	Exams Movement Analysis Final Project Video creation
4. Describe the fundamentals of biomechanics used in given movements.	Open Discussions Individual and Small Group Paper Presentations Internet Searches Written Assignments Written Examinations Qualitative Movement Analysis Video creation	Exams Movement Analysis Final Project Video creation
5. Evaluate joint actions and muscles involved in movement analysis of a multi-joint movement sequence.	Open Discussions Individual and Small Group Paper Presentations Internet Searches Written Assignments Written Examinations Qualitative Movement Analysis Video creation	Exams Movement Analysis Final Project Video creation

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria*.

SEQUENCE OF TOPICS:

- A. Foundations of Applied Kinesiology
- B. Application of Kinesiology to the Skeletal System
- C. Application of Kinesiology to the Muscular System
- D. Application of Kinesiology to the Neuromuscular Basis of Human Motion
- E. Applied Biomechanics
- F. Human Motion
- G. Center of Gravity and Stability
- H. Application of Kinesiology to Anatomical Regions
- I. Application of Kinesiology to Motor Skills

- J. Movement Analysis
- K. Exercise programming across the lifespan

LEARNING MATERIALS:

Text:

Floyd. (2014). *Manual of Structural Kinesiology* (19th ed.). New York, NY: McGraw-Hill.

Reference:

ACSM Journal

Research Quarterly for Exercise and Sport.

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL: 2/10/2000

Prepared by: Sheldon Chamberlain and Joselle Edwards Date: 12/9/2005

Revised by: Dr. Anne Livezey Date: 2/2009

VPAA/Provost Compliance Verification: Dr. John C. Flynn, Jr. Date: 9/11/2009

Revised by: Dr. Anne Livezey Date: 12/2012

VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 12/2012

Revised by: Amanda Wooldridge and Dr. Anne Livezey Date: 7/2014

VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 12/2014

This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.