SYLLABUS

**CIP CODE:** 24.0101

**SEMESTER:** DEPARTMENTAL SYLLABUS

**COURSE TITLE:**  Kinesiology

**COURSE NUMBER:** BIOL -0160

**CREDIT HOURS:** 3

**INSTRUCTOR:** DEPARTMENTAL SYLLABUS

**OFFICE LOCATION:** DEPARTMENTAL SYLLABUS

**OFFICE HOURS:** DEPARTMENTAL SYLLABUS

**TELEPHONE:**  DEPARTMENTAL SYLLABUS

**EMAIL:** DEPARTMENTAL SYLLABUS

KCKCC issued email accounts are the official means for electronically communicating with our students.

**PREREQUISITES:**

Human Anatomy and Laboratory, BIOL-0141, Physiology, BIOL-0271/Physiology Laboratory, BIOL-0272, English Composition I, ENGL-001.

**REQUIRED TEXT AND MATERIALS:** See bookstore for current textbook.

**COURSE DESCRIPTION:**

Kinesiology provides a link between muscular origin and insertion and the mechanics of muscular action. Knowledge of the body mechanics and the body as a lever system assists students in the ability to analyze movement. This course will help the student locate, palpate and analyze movement. When abnormal changes occur, the information presented explores other issues which may cause the dysfunction.

**METHOD OF INSTRUCTION:** A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

**Online Sections:**  Online courses rely on the use of the Internet and a course management system for content delivery.  Courses are accessible both on campus and from most remote sites.  Specific information regarding computer skills and system requirements can be found at <http://helpdesk.kckcc.edu/helpdesk/>

**Honors Sections:** An honors section of this course provides a non-traditional environment for learning that incorporates active student participation, critical reflection, use of primary sources and innovative teaching methods. Classes are designated as honors on the transcript. Enrollment in the honors section of this class requires the permission of the Director of Honors Education

**COURSE OUTLINE:**

# Terminology associated with kinesiology and medical terminology related to the structure and function of the human body

1. Terminology and basic concepts of kinesiology
2. Definitions
3. Reference positions of the body
4. Planes and axes
5. Joints and joint structures
6. Lever system of the human body
7. B. Medical terminology related to the structure and function of the human body
8. 1. Neck and Trunk
9. Bones and landmarks of the vertebral column
10. Joints of the spine
11. Movements of the neck and trunk

d. Muscle groups of the neck and trunk

1. Origins, insertions, actions and innervations of primary movers
2. Shoulder girdle and shoulder joint
3. Bones and landmarks of the shoulder
4. Joints of the shoulder
5. Movements of the shoulder
6. Muscle groups of the shoulder including the rotator cuff
7. Origins, insertions, actions and innervations of primary movers
8. Elbow and radio ulnar joint
9. Bones and landmarks of the elbow
10. Movements of the elbow and radioulnar joints
11. Musculature
12. Origins, insertions, actions and innervations of primary movers
13. Wrist and Hand
14. Bones and landmarks of wrist and hands
15. Joints of wrist and hands
16. Movements of wrist and hands
17. Muscle groups
18. Origins, insertions, actions and innervations of primary movers
19. Hip
20. Bones and landmarks of the pelvis and hip
21. Joints of the pelvis and hip
22. Movements of the pelvis and hip
23. Muscle groups of the hip
24. Knee
25. Bones and landmarks
26. Knee joint
27. Movements of the knee
28. Muscle groups of the knee
29. Ankle and foot
30. Bones and landmarks of the ankle and foot
31. Joints of the ankle and foot
32. Movements of the ankle and foot
33. Muscle groups of the ankle and foot
34. Respiration
35. Joints and articulation of the thoracic cavity
36. Movements of the thorax
37. Muscles of respiration
38. Phases of respiration
39. Analyze joint motion and muscle strength
40. Functional analysis
41. Work activity
42. Play/recreational activity
43. Analysis of weight training positions
44. Free weights
45. Strength training for specific joints

III. Analyze movement: normal/abnormal/substitute movements

1. A. Posture
2. Relationship of center of gravity, base of support and outside forces on posture
3. Optimal erect standing
4. Deviations in posture
5. B. Gait
6. Joint motion and primary muscle activity during gait
7. Upper extremity and trunk motions
8. Abnormal gait patterns
9. C. Analysis of movement
10. Analyzing joint movement in an extremity
11. Substitutions in relation to goniometry
12. Substitutions during manual muscle testing

IV. Clinical conditions: deficits in joint motion and muscle strength

1. A. Joint motion deficits and specific clinical conditions
2. B. Deficits in muscle strength and specific clinical conditions
3. Purposeful activity and occupations for specific clinical conditions

A. Therapeutic interventions for muscle weakness and/or movement deficits

1. B. Adaptations for muscle weakness and/or movement deficits

**EXPECTED LEARNER OUTCOMES:**

1. The student will be able to apply appropriate TERMINOLOGY ASSOCIATED WITH KINESIOLOGY AND MEDICAL TERMINOLOGY to the structure and function of the human body.
2. The student will be able to ANALYZE JOINT MOTION AND MUSCLE STRENGTH of the upper and lower extremities following specific assessment procedures.
3. The student will be able to ANALYZE MOVEMENT patterns and differentiate NORMAL from ABNORMAL or SUBSTITUTE MOVEMENT patterns.
4. The student will be able to discuss CLINICAL CONDITIONS as these conditions relate to DEFICITS IN JOINT MOTION AND MUSCLE STRENGTH.
5. The student will be able to identify PURPOSEFUL ACTIVITIES AND OCCUPATIONS appropriate for therapeutic interventions FOR specific deficit areas and CLINICAL CONDITIONS.

**COURSE COMPETENCIES:**

*The student will be able to apply appropriate terminology associated with kinesiology and medical terminology to the structure and function of the human body*

1. The student will be able to state the definition of kinesiology, static and dynamic movement.
2. The student will be able to describe the difference between the two reference positions of the body.
3. The student will be able to list the planes and axes of movement of the human body.
4. The student will be able to describe the types of joints and joint structures found in the human body.
5. The student will be able to demonstrate knowledge of the lever system of the human body.
6. The student will be able to identify the bones and landmarks of the:

Vertebral column

Shoulder girdle and shoulder joint

Elbow and radio ulnar joint

Wrist and hand

Hip

Knee

Ankle and foot

1. The student will be able to identify the joints of the:

Vertebral column

1. Shoulder girdle and shoulder joint
2. Elbow and radio ulnar joint
3. Wrist and hand
4. Hip
5. Knee
6. Ankle and foot
7. Thoracic cavity

8. The student will be able to describe the movements of the:

Vertebral column

1. Shoulder girdle and shoulder joint
2. Elbow and radio ulnar joint
3. Wrist and hand
4. Hip
5. Knee
6. Ankle and foot
7. Thorax

9. The student will be able to identify the musculature of the:

Vertebral column

1. Shoulder girdle and shoulder joint
2. Elbow and radio ulnar joint
3. Wrist and hand
4. Hip
5. Knee
6. Ankle and foot
7. Respiration process along with the phases of respiration
8. The student will be able to summarize the origins, insertions, actions and innervations of the primary movers of the:

Vertebral column

1. Shoulder girdle and shoulder joint
2. Elbow and radioulnar joint
3. Wrist and hand

*The student will be able to analyze joint motion and muscle strength of the upper and lower extremities following specific assessment procedures.*

1. The student will be able to identify and palpate landmarks
2. The student will be able to identify and palpate specific muscle groups

*The student will be able to analyze movement patterns and differentiate normal from abnormal or substitute movement patterns.*

1. The student will be able to describe the body’s center of gravity, base of support and outside forces that influence posture
2. The student will be able to describe the elements of optimal erect standing
3. The student will be able to explain the elements of normal gait including position and patterns of movement in the head, upper extremities, lower extremities and trunk
4. The student will be able to analyze specific joint movements of an extremity during a purposeful activity and occupation
5. The student will be able to recognize abnormal posture and gait patterns
6. The student will be able to recognize substitutions and preventing substitutions during the performance of an activity.

*The student will able to discuss clinical conditions as these conditions relate to deficits in joint motion and muscle strength by:*

1. The student will be able to relate deficits of joint motion to specific clinical conditions
2. The student will be able to relate deficits of muscle strength to specific clinical conditions

*The student will be able to identify purposeful activities and occupations appropriate for therapeutic intervention for specific deficit areas and clinical conditions.*

1. The student will be able to discuss general therapeutic interventions for muscle weakness and movement deficits
2. The student will be able to explain general therapeutic adaptations for muscle weakness and/or movement deficits

**ASSESSMENT OF LEARNER OUTCOMES:**

Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

**Note to Students Taking Online Classes:**

The decision to take a class online as opposed to an on-ground class should be carefully considered before enrolling. It is true that online courses allow a student to be free of time and place. Class occurs when the student logs on to the computer at his or her convenience. It doesn’t matter if it’s 6:00 pm in the computing lab, Sunday afternoon at the library, at 3:00 am at home. The class will be there when the student is ready. That’s a wonderful advantage to those with full time jobs, full time family obligations, transportation problems, special needs or interests.

However advantageous online courses appear to be, please consider the following:

* Online courses require extreme self-discipline. One must log on and be prepared to read through many pages and comments. It must be done regularly (3-5 times per week) or the process can take several hours.
* A great deal of time is spent visiting web sites, reading articles, dealing with technical problems. Technology is unreliable. The plan to submit homework at the last moment can be defeated with a busy or down server.
* Sometimes the cyberdog eats your homework. This is no excuse for not submitting homework. You should always have a copy saved to a disk so you can resubmit. Failure to do so leads to more work.
* Most people who have taken online courses will tell you that it is more “labor intensive” than on-ground courses. It just takes more time. In an online course every student contributes to the discussion. That rarely happens on-ground.
* Online classes tend to be accelerated. This is, material is covered at a faster pace. It would not be uncommon for an online class to cover in 10-12 weeks what an on-ground class covers in 16. This may not always be the case, but it is possible.
* If you are not highly motivated, disciplined, and patient, online course are not the best option. There are other forms of distance education that may be more appropriate for you.

**SPECIAL NOTES**:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of Academic Resource Center, in Rm. 3354 or call at: 913-288-7670.

KANSAS CITY KANSAS COMMUNITY COLLEGE

COMPETENCY INDEX

Course Number/Section/Title: **BIOL-0160 Kinesiology**

Student Name: Student Number:

Instructor: Division:

RATING SCALE for Competency Achievement

4-Superior, 3-Good, 2-Average, 1-Inferior, 0-Failure, NA-not addressed

DIRECTIONS:

Evaluate the student by checking or highlighting the appropriate number to indicate the degree of competency achieved.

COURSE COMPETENICES:

**Upon successful completion of this course on written and/or practical examination, the student will demonstrate the ability to:**

4 3 2 1 0 NA 1. The student will be able to state the definition of kinesiology, static and dynamic movement.

4 3 2 1 0 NA 2. The student will be able to describe the difference between the two reference positions of

the body.

4 3 2 1 0 NA 3. The student will be able to list the planes and axes of movement of the human body.

4 3 2 1 0 NA 4. The student will be able to describe the types of joints and joint structures found in the human body.

4 3 2 1 0 NA 5. The student will be able to demonstrate the knowledge of the lever system of the body.

4 3 2 1 0 NA 6. The student will be able to identify the bones and landmarks of the vertebral column, shoulder girdle and shoulder joint, elbow and radio ulnar joint, wrist and hand, hip, ankle and foot.

4 3 2 1 0 NA 7. The student will be able to identify the joints of the vertebral column, shoulder girdle and shoulder, elbow and radio ulnar joint, wrist and hand, hip, knee, ankle and foot and thoracic cavity.

4 3 2 1 0 NA 8. The student will be able to describe the movements of the vertebral column, shoulder girdle and shoulder joint, elbow and radio ulnar joint, wrist and hand, hip, knee, ankle and foot and thorax.

4 3 2 1 0 NA 9. The student will be able to identify the musculature of the vertebral column, shoulder girdle and shoulder joint, elbow and radio ulnar joint, wrist and hand, hip, knee, ankle and foot and the respiration process along with the phases of respiration.

4 3 2 1 0 NA 10. The student will be able to summarize the origins, insertions, actions and innervations of the primary movers of the vertebral column, shoulder girdle and shoulder joint, elbow and radio ulnar joint and wrist and hand.

4 3 2 1 0 NA 11. The student will be able to identify and palpate landmarks.

4 3 2 1 0 NA 12 The student will be able to identify and palpate specific muscle groups.

4 3 2 1 0 NA 13. The student will be able to describe the body’s center of gravity, base of support and outside forces that influence posture.

4 3 2 1 0 NA 14. The student will be able to describe the elements of optimal erect standing.

4 3 2 1 0 NA 15. The student will be able to explain the elements of normal gait, including positions and patterns of movement in the head, upper extremities, lower extremities and trunk.

4 3 2 1 0 NA 16. The student will be able to analyze specific joint movements of an extremity during a purposeful activity and occupation.

4 3 2 1 0 NA 17. The student will be able to recognize abnormal postures and gait patterns.

4 3 2 1 0 NA 18. The student will be able to recognize substitutions and preventing substitutions during the performance of an activity.

4 3 2 1 0 NA 19. The student will be able to relate deficits of joint motion to specific clinical conditions.

4 3 2 1 0 NA 20. The student will be able to relate deficits of muscle strength to specific clinical conditions.

4 3 2 1 0 NA 21. The student will be able to discuss general therapeutic interventions for muscle weakness and movement deficits.

4 3 2 1 0 NA 22. The student will be able to explain general therapeutic adaptations for muscle weakness and/or movement deficits.

Please check one of the following:

\_\_\_\_\_\_I certify that the student completed the course and the competencies indicated as indicated.

\_\_\_\_\_\_I certify that the student completed 25% of the course competencies, as indicated.

Instructor Signature: Date:

### Kansas City Kansas Community College

### 21st Century General Education Learning Outcomes

### Learning Outcomes

Discipline knowledge and content mastery is expected of all graduates. More specifically, KCKCC is committed to the Learning Outcomes listed below. We believe that competence in the Learning Outcomes is essential for the success of graduates and will enhance their ability to become contributing members of our increasingly complex world. These areas of knowledge and skills are equally valid for all KCKCC graduates, whether they transfer to a four-year college or pursue a career after leaving college.

### General Education Learning Outcomes

#### Communication Learning Outcomes

The learner will have the ability to express, interpret, and modify ideas/information effectively (both written and oral), including but not limited to reading text accurately and correctly; writing with a clear purpose and effective organization; speaking effectively using appropriate styles that suit the message, purpose, and content; and employing active listening techniques.

#### Computation Learning Outcomes

The learner will have the ability to understand and apply mathematical concepts and reasoning using numerical data.

#### Critical Reasoning Learning Outcomes

The learner will understand inductive and deductive reasoning and have the ability to define problems and use data (qualitative and quantitative) to make complex decisions utilizing analysis, synthesis, and evaluation skills.

#### Technology and Information Management Learning Outcomes

The learner will have the ability to define, collect, organize, analyze, and evaluate information from a variety of sources. The learner will also have the ability to understand basic technology concepts and functionality in order to use technology as a tool to locate and retrieve information.

#### Community and Civil Responsibility Learning Outcomes

The learner will demonstrate knowledge, awareness, and understanding of diverse ideas, values, and perspectives of a culturally diverse world; an understanding of the ethical issues and values that are prerequisites for making sound judgments and decisions; a recognition of the obligation to become actively involved as a contributing member of the community; and a sensitivity to the awareness of aesthetic expression.

#### Personal and interpersonal Skills Learning Outcomes

The learner will have the ability to work cooperatively and productively with others; to understand and evaluate his/her capabilities; to manage his/her personal growth by setting realistic and appropriate goals.