COURSE TITLE: Musculoskeletal: Spine and Special Topics
COURSE NUMBER: PHTR 0230/1230
CREDIT HOURS: 5
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: Fundamental Treatment Procedures
Musculoskeletal I
Clinical Skills I

REQUIRED TEXT AND MATERIALS:
Please check the KCKCC bookstore, http://www.kckcebookstore.com/ for the required texts.

COURSE DESCRIPTION:
This course provides a link between the principles of biomechanics, musculoskeletal anatomy and neuromuscular physiology and their application to movement analysis for the head and trunk. This course covers the role of the physical therapist assistant in treating patients who have common musculoskeletal disorders of the head and trunk, amputations or chronic pain. The student will learn the theoretical foundation for intervention strategies, as well as components of assessment and will be introduced to the topics of aquatics, disability law, occupational health, and injury prevention.

METHODS 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, learning experiences, and performances outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:
I. Head & Trunk
   A. Anatomy
   B. Musculoskeletal Disorders
   C. Physical Therapy Tests and Measures
   D. Interventions

II. Posture
   A. Assessment
   B. Interventions

III. Amputations & Prosthetics
   A. Types of Amputations
   B. Interventions
   C. Lower Extremity Prosthetic Devices

IV. Gait Deviations for Patients with a Lower Extremity Prosthesis
   A. Recognition of Gait Deviations
   B. Causes of Gait Deviations
   C. Interventions

V. Osteoporosis
   A. Pathology
   B. Physical Therapy Implications

VI. Chronic Pain
   A. Physiology of Chronic Pain
   B. Common Disorders Associated with Chronic Pain
   C. Medical and Physical Therapy Management of Chronic Pain

VII. Disability Laws and Architectural Barriers
   A. Federal Laws Related to Disability
   B. Environmental Assessment of Barriers

VIII. Occupational Health
   A. Workers Compensation Law
   B. Job Descriptions and Worksite Evaluations
   C. Work Hardening/Work Conditioning

IX. Wellness Programs & Injury Prevention

X. Aquatic Therapy
   A. Physiology
   B. Interventions
EXPECTED LEARNER OUTCOMES:
Upon successful completion of the course, on written and/or practical examination:

A. The student will describe the musculoskeletal anatomy of the head & trunk.
B. The student will discuss the effects of injury on the spine and TMJ.
C. The student will perform various physical therapy tests and measures of the spine and TMJ.
D. The student will perform various physical therapy interventions for the treatment of musculoskeletal disorders of the spine and TMJ.
E. The student will recognize postural deviations and relate them to common causes.
F. The student will understand the role of physical therapy in the treatment of patients with an amputation.
G. The student will perform a gait assessment for patients with a lower limb prosthesis.
H. The student will understand the pathology and management of osteoporosis.
I. The student will understand the role of physical therapy in managing chronic pain.
J. The student will recognize common architectural barriers for people with disabilities.
K. The student will understand the role of physical therapy in an occupational health setting.
L. The student will apply the principles of aquatic therapy.
M. The student will discuss the role of wellness programs and alternative therapies in physical therapy.
N. The student will demonstrate appropriate interpersonal skills when interacting with others.

COURSE COMPETENCIES:
The student will describe the musculoskeletal anatomy of the head & trunk.

1. The student will identify bony landmarks throughout the head & trunk.
2. The student will identify the origin, insertion, action and innervations of the muscles that control the tempromandibular joint (TMJ), cervical spine & trunk.
3. The student will analyze how anatomical structures affect joint mobility and stability.
4. The student will differentiate normal from abnormal joint structure and mechanics.

The student will discuss the effects of injury on the spine and TMJ.

5. The student will list mechanisms of injury for musculoskeletal disorders of the spine and TMJ.
6. The student will identify the specific tissues involved in various musculoskeletal disorders of the spine and TMJ.
7. The student will differentiate expected from unexpected signs, symptoms and functional deficits for various musculoskeletal disorders of the spine and TMJ.

The student will perform various physical therapy tests and measures of the spine and TMJ.

8. The student will perform sensory testing to assess the dermatomes of the extremities.
9. The student will perform range of motion testing for the TMJ and spine.
10. The student will perform reflex testing of the extremities.
11. The student will perform manual muscle testing to assess the myotomes of the extremities and to test the muscles of the trunk & spine.
12. The student will monitor changes in thoracoabdominal movement.
13. The student will judge when changes in the patient’s status should be reported to the supervising physical therapist.
14. The student will accurately document the results of various tests and measures.

The student will perform various physical therapy interventions for the treatment of musculoskeletal disorders of the spine and TMJ.
15. The student will implement exercise programs that follow the plan of care for musculoskeletal disorders of the spine and TMJ.
16. The student will demonstrate the proper use of traction of the spine.
17. The student will identify common medical and physical therapy interventions for musculoskeletal disorders of the spine & TMJ.
18. The student will provide appropriate patient education based upon the needs of the patient.
19. The student will assess the appropriateness of physical therapy interventions based on the type of musculoskeletal disorder and the stage of healing.
20. The student will respond to an individual patient’s needs by adjusting interventions within the plan of care created by the physical therapist.
21. The student will discuss the need for changes to the plan of care with the supervising physical therapist.
22. The student will accurately document physical therapy interventions.

**The student will recognize postural deviations and relate them to common causes.**
23. The student will perform a postural assessment of a classmate.
24. The student will examine the relationship between postural deviations and common causes.

**The student will understand the role of physical therapy in the treatment of patients with an amputation.**
25. The student will describe various levels of lower extremity amputation.
26. The student will compare and contrast different methods of controlling postoperative edema following amputation.
27. The student will identify common medical and physical therapy interventions for patients with a LE amputation.
28. The student will demonstrate proper methods of residual limb bandaging.

**The student will perform a gait assessment for patients with a lower limb prosthesis.**
29. The student will identify the components of a lower limb prosthesis and their purpose.
30. The student will compare and contrast the appropriateness of various prosthetic components for individual patient needs.
31. The student will discuss proper care for and safety with use of prosthetic devices.
32. The student will identify common gait deviations for patients with a prosthesis.
33. The student will examine the relationship between gait deviations and common causes.

**The student will understand the pathology and management of osteoporosis.**
34. The student will identify the risk factors for the development of osteoporosis.
35. The student will identify typical medical diagnosis and management of osteoporosis.
36. The student will propose modifications to physical therapy assessments and interventions for patients with osteoporosis.

**The student will understand the role of physical therapy in managing chronic pain.**
37. The student will describe common physical therapy diagnoses related to chronic pain.
38. The student will demonstrate an appreciation of the psychological and behavioral factors related to chronic pain by modifying communication and interventions appropriately.
39. The student will identify common medical and physical therapy interventions for the management of chronic pain.

**The student will recognize common architectural barriers for people with disabilities.**
40. The student will apply knowledge of disability laws to explain a patient’s legal rights.
41. The student will perform an environmental assessment for the purpose of identifying and modifying
architectural barriers that may exist for individuals with a physical disability.

The student will understand the role of physical therapy in an occupational health setting.
42. The student will identify terminology unique to the occupational health setting.
43. The student will propose workstation modifications to reduce injury risk factors.
44. The student will apply the principles of conditioning and reconditioning to a work hardening/conditioning scenario.

The student will apply the principles of aquatic therapy.
45. The student will explain the basic principles of aquatic therapy, including the physics of water.
46. The student will select pool exercises that are appropriate for the specific needs of a patient.

The student will discuss the role of wellness programs and alternative therapies in physical therapy.
47. The student will apply the concepts of behavioral change theories to wellness programs.
48. The student will appraise the value of an alternative therapy based upon available evidence.

The student will demonstrate appropriate interpersonal skills when interacting with others.
49. The student will display a professional demeanor during all interactions.
50. The student will demonstrate professional behavior that reflects practice standards that are legal, ethical and safe.
51. The student will display the value of communication by interacting appropriately both verbally and nonverbally during laboratory practicals.
52. The student will display concern for patient comfort by using appropriate positioning and handling techniques during laboratory practicals.

ASSESSMENT OF LEARNER OUTCOMES:
Assessment methods include, but may not be limited to: written examinations, lab practicals, homework, and observation of professional behavior.

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 the Academic Resource Center, in Rm. 3354 or call at: 288-7670.