PTA 009: FUNCTIONAL ANATOMY + KINESIOLOGY

Originator
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Co-Contributor(s)

Name(s)
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Justification / Rationale
Modifying class to 3 credit lecture class with separate lab section to align with CAPTE standards

Effective Term
Fall 2022

Credit Status
Credit - Degree Applicable

Subject
PTA - Physical Therapist Assistant

Course Number
009

Full Course Title
Functional Anatomy + Kinesiology

Short Title
FUNC ANT + KINE

Discipline

Disciplines List
Physical Therapy Assisting

Modality
Face-to-Face

Catalog Description
This course is a continuation of Introduction to Kinesiology and deals with the biomechanical principles of the cervical spine, thoracic spine, lumbar spine, upper extremities, and lower extremities of the body. The course includes the kinesiological functions of muscles and muscle groups. Clinical manifestations of muscle dysfunction are covered, as well as techniques for joint measurement. Assessment by manual muscle testing, ROM testing and activities of daily living are presented.
Limitation on enrollment: Admission to the Physical Therapist Assistant (PTA) Program

Schedule Description
Kinesiology of the cervical, thoracic and lumbar spines and upper and lower extremities. Includes assessment techniques and activities of daily living (ADL's).
Prerequisite: KINE 008
Advisory: ENG 061
Limitation on enrollment: Admission to the Physical Therapist Assistant (PTA) Program

Lecture Units
3

Lecture Semester Hours
54

Lab Units
0

In-class Hours
54

Out-of-class Hours
108

Total Course Units
3

Total Semester Hours
162

Prerequisite Course(s)
KINE 008
Advisory: ENG 061

Limitation on Enrollment
Admission to the Physical Therapist Assistant (PTA) Program

Required Text and Other Instructional Materials

Resource Type
Book

Author
Lippert, L.

Title
Clinical Kinesiology and Anatomy

Edition
6th

Publisher
F. A. Davis Company

Year
2017

College Level
Yes

Flesch-Kincaid Level
12

ISBN #
978080365823

Resource Type
Book

Author
Pierson, F.

Title
Principles and Techniques of Patient Care

Edition
6th

Publisher
W. B. Saunders

Year
2018

College Level
Yes

Flesch-Kincaid Level
12

ISBN #
978032344584

Resource Type
Book

Author
Duesterhaus-Minor, M.A. and Lippert, L.

Title
Kinesiology Laboratory Manual for Physical Therapist Assistants

Publisher
F. A. Davis Company

Year
2017

College Level
Yes

Class Size Maximum
25

Entrance Skills
Identify and employ prewriting activities.

Requisite Course Objectives
ENG 061-Use theses to organize paragraphs into coherent analyses.

Entrance Skills
Comprehend and summarize readings.

Requisite Course Objectives
ENG 061-Demonstrate the ability to read and respond in writing beyond the literal interpretation of the text.

Entrance Skills
Demonstrate the ability to generate, develop and organize ideas into cohesive essay using multiple paragraphs.

Requisite Course Objectives
ENG 061-Recognize features of style such as purpose, audience and tone integrate these elements into academic and professional writing.

Entrance Skills
Understand the role of physical activity for health and longevity.

Requisite Course Objectives

KINE 008-Articulate the nature for and insights into the importance of physical activity in daily life and the implications of this for the discipline of kinesiology.

Entrance Skills

Knowledge of the basic foundations of kinesiology.

Requisite Course Objectives

KINE 008-Identify the basic concepts of kinesiology.

Entrance Skills

Apply scientific principles of kinesiology to the patient care setting.

Requisite Course Objectives

KINE 008-Identify the relationship between performance in the movement forms of sport, dance, and exercise and the conceptual foundations of the sub-disciplines.

Course Content

1. Anatomical position for the upper and lower extremities. List and classify motion available to the head, neck, thoracic, lumbar spine and upper and lower extremities.
2. Classes of levers and identify where they exist in the lumbar, thoracic, upper and lower extremities, and cervical areas.
3. Palpation techniques and illustrations to identify bony landmarks on the lumbar, thoracic, upper and lower extremities, and cervical areas.
4. Normal range-of-motion for the lumbar, thoracic, upper and lower extremities, and cervical areas.
5. Proper use of the Goniometer as an assessment tool.
6. Isometric, isotonic, and isokinetic testing methods for the areas of the lumbar, thoracic, upper and lower extremities, and cervical areas.
7. How range-of-motion limitations may affect strengthening activities, as well as, functional capabilities.
8. Ways in which sensory impairment may be assessed and how the impairment might affect the functional capability of the patient.
9. Introduction to activities of daily living.
10. Rationale for initial documentation of range-of-motion.
11. Reasons for initial documentation of strength and describe ways in which weakness or poor motor control may affect a patient's functional capabilities.
12. Possible treatment applications based on a specific evaluation and treatment plan.
13. Origin, insertion, action, and innervation of muscles of the upper and lower extremity, trunk, lumbar, thoracic and cervical spine.

Course Objectives

	Objectives
Objective 1	Identify, analyze, and integrate appropriate evidence based resources to support clinical decision making for progression of the patient within the plan of care established by the physical therapist.
Objective 2	Synthesize accurate documentation that follows guidelines and specific documentation formats required by state practice acts, the practice setting, and other regulatory agencies.
Objective 3	Relate muscle origin and insertion with biomechanics and movement and demonstrate proficiency in utilizing manual muscle testing to assess muscle strength.
Objective 4	Illustrate normal biomechanical movement through functional activities.
Objective 5	Describe how pathological and limited joint mechanics can affect functional movement and accurately monitor joint range of motion through use of a goniometer.

Student Learning Outcomes

	Upon satisfactory completion of this course, students will be able to:
Outcome 1	Apply the origin, insertion, action and innervation for the muscles and how they affect biomechanical movements.
Outcome 2	Understand how muscle strength and ROM will affect biomechanics
Outcome 3	Analyze the relationship biomechanics and performance.

Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Demonstration, Repetition/Practice	Instructor demonstration of learning unit materials.
Discussion	Small and large group discussions around learning unit materials and lectures.
Technology-based instruction	Utilize technology-based devices to analyze biomechanics
Lecture	Lecture is broken up into twenty- to thirty-minute segments with activities interspersed to create an active learning environment.

Methods of Evaluation

Method	Please provide a description or examples of how each evaluation method will be used in this course.	Type of Assignment
Term or research papers	Breakdown of biomechanics of a ADL or sports-related movement	Out of Class Only
Written homework	Student homework and reflection based on weekly readings	In and Out of Class
Mid-term and final evaluations	Cumulative midterm and final	In Class Only

Assignments

Other In-class Assignments

Reading Assignments

1. Handouts
2. Journal articles

Writing Assignments

1. Reading reports - documentation practice

Other Out-of-class Assignments

Reading Assignments

1. Assigned readings from textbooks

Writing Assignments

1. Written homework
2. Biomechanics paper

Grade Methods

Letter Grade Only

MIS Course Data

CIP Code

51.0806 - Physical Therapy Technician/Assistant.

TOP Code

122200 - Physical Therapist Assistant

SAM Code

C - Clearly Occupational

Basic Skills Status

Not Basic Skills

Prior College Level

Not applicable

Cooperative Work Experience

Not a Coop Course

Course Classification Status
Credit Course

Approved Special Class
Not special class

Noncredit Category
Not Applicable, Credit Course

Funding Agency Category
Not Applicable

Program Status
Program Applicable

Transfer Status
Not transferable

Allow Audit
No

Repeatability
No

Materials Fee
No

Additional Fees?
No

Files Uploaded

Attach relevant documents (example: Advisory Committee or Department Minutes)
2017 - Meeting Notes - 05-16-17.pdf
LMI_Physical Therapy_Dec2017.pdf
PTA 009 CO Approval Letter.pdf

Approvals

Curriculum Committee Approval Date
03/17/2022

Academic Senate Approval Date
03/24/2022

Board of Trustees Approval Date
04/22/2022

Chancellor's Office Approval Date
05/06/2022

Course Control Number
CCC000631407