



## Physical Therapy II

PEIMS Code: N1302134

Abbreviation: PHYTHER2

Grade Level(s): 11-12

Award of Credit: 1.0

### Approved Innovative Course

- Districts must have local board approval to implement innovative courses.
- In accordance with Texas Administrative Code (TAC) §74.27, school districts must provide instruction in all essential knowledge and skills identified in this innovative course.
- Innovative courses may only satisfy elective credit toward graduation requirements.
- Please refer to [TAC §74.13](#) for guidance on endorsements.

### Course Description:

The Physical Therapy II innovative course is intended for 11th and 12th-grade students. Students will build upon the foundational skills that students learned in Physical Therapy I by practicing skills such as musculoskeletal strength and range of motion (ROM) assessment, safety techniques, administering therapeutic exercise routines, and professional skills. Upon completing this course, students will have the foundational knowledge to pursue post-secondary education that prepare them for a career as a licensed Physical Therapist or Physical Therapist Assistant.

### Essential Knowledge and Skills:

- (a) General Requirements. This course is recommended for students in 11th - 12th grade. Recommended prerequisites: Biology or Physical Therapy 1. Recommended corequisites: Anatomy and Physiology. Students shall be awarded one- credit for successful completion of this course.
- (b) Introduction
  - (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.
  - (2) The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.
  - (3) The Physical Therapy II innovative course is intended for 11th- and 12th-grade students. Students will build upon the foundational skills that were learned in Physical Therapy I by practicing skills such as musculoskeletal strength and range of motion (ROM), practicing and analyzing safety techniques, teaching therapeutic exercise routines, and professional skills. Upon completing this course, students will have the foundational knowledge to

pursue post-secondary education that leads to a career as a licensed Physical Therapist or Physical Therapist Assistant.

- (4) To pursue a career in the health science industry, students should recognize and develop skills to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others.
  - (5) The health science industry is composed of diagnostic, therapeutic, health informatics, support services, and biotechnology research and development systems that function individually and collaboratively to provide comprehensive health care. Students should identify the employment opportunities, technology, and safety requirements of each system. Students are expected to apply the knowledge and skills necessary to pursue a health science career through further education and employment.
  - (6) Professional integrity in the health science industry is dependent on the acceptance of ethical and legal responsibilities. Students are expected to employ ethical and legal responsibilities, recognize limitations, and understand the implications of their actions.
  - (7) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
  - (8) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.
- (c) Knowledge and Skills.
- (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:
    - (A) communicate ideas in a clear, concise, and effective manner;
    - (B) demonstrate the ability to actively listen to mock patients, record patient examination data, and ensure patient confidentiality;
    - (C) communicate and delegate mock patient responsibilities to other staff members;
    - (D) cooperate, contribute, and collaborate as a member of a team;
    - (E) develop a resume and cover letter; and
    - (F) exhibit the ability to meet employer expectations such as punctuality, attendance, time management, communication, organizational skills, and productive work habits.
  - (2) The student uses verbal, nonverbal, and written communication skills. The student is expected to:
    - (A) critique communication skills in various scenarios such as when responding to a patient who is angry and when assisting a patient who is experiencing a mental health crisis;
    - (B) analyze patient communication for the purpose of documenting Subjective, Objective, Assessment, and Plan (SOAP);

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- (C) demonstrate SOAP note-taking;
  - (D) analyze communication barriers when working with special populations such as patients who have had a stroke, individuals with cognitive impairments, and patients with traumatic brain injuries; and
  - (E) demonstrate appropriate verbal and non-verbal communication when role-playing scenarios that involve various special populations.
- (3) The student researches and describes careers in and related to physical therapy. The student is expected to:
- (A) research and describe the steps to applying to the post-secondary associate, bachelor's, and doctorate degree programs such as determining the requirements for completion of education, number of classes and credits needed, and clinical rotations;
  - (B) research and compare the average costs of completing associate, bachelor's, and doctorate programs;
  - (C) research and identify scholarship opportunities to reduce the cost of schooling;
  - (D) research and describe the steps necessary to find, apply, interview, and accept a job such as Physical Therapist Aide, Physical Therapist Assistant, Physical Therapist, or other related careers;
  - (E) evaluate the role of professional organizations such as in continuing education, certification, research, political action, and lobbying; and
  - (F) research and compare careers related to physical therapy such as women's health specialist and sports clinical specialist.
- (4) The student investigates the structures, functions, and pathologies of the musculoskeletal system. The student is expected to:
- (A) examine the anatomy and physiology of the muscular and skeletal systems;
  - (B) differentiate between concentric, eccentric, isotonic, and isometric muscle actions;
  - (C) research and present on muscular and skeletal system pathologies such as fractures, muscular dystrophy, myopathy, and their effects on movement; and
  - (D) demonstrate the palpation of key musculoskeletal landmarks such as the greater trochanter of the femur, tibial tuberosity of the tibia, and medial epicondyle of the humerus.
- (5) The student recognizes terminology related to the health science industry. The student is expected to:
- (A) identify abbreviations, acronyms, and symbols related to physical therapy;
  - (B) analyze directional terms and anatomical planes related to the body structure;
  - (C) define and accurately spell terms specific to physical therapy such as those relating to the body systems, surgical and diagnostic procedures, diseases, and treatment; and
  - (D) explain how prior knowledge and experiences apply terms related to physical therapy.

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- (6) The student assesses the range of motion (ROM), muscle strength, and analyzes a plan of care. The student is expected to:
- (A) identify the components of a goniometer and landmarks used to measure joint ROM;
  - (B) define the normal ROM for the major joints of bodies;
  - (C) describe and demonstrate how to measure the joint ROM using a goniometer;
  - (D) summarize the action of the major muscles of the body;
  - (E) describe and demonstrate how to test the strength of each major muscle of the body;
  - (F) define the grading system when manual muscle testing;
  - (G) describe how to strengthen weakened or atrophied muscles, such as quadriceps, biceps, and gluteals;
  - (H) determine appropriate exercises for the patient to improve strength for independent bed mobility and transfers;
  - (I) develop a plan and safely execute patient transfers such as bed to stretcher, bed to a wheelchair, a bed to chair, wheelchair to toilet, and sit to stand;
  - (J) demonstrate how to examine patient bed mobility and determine the level of assistance needed for bed mobility and transfers.
  - (K) observe and analyze normal and abnormal gait patterns;
  - (L) identify and describe abnormal gait patterns and what structures such as muscle, bones, ligaments, and tendons affected;
  - (M) demonstrate how to improve abnormal gait patterns; and
  - (N) analyze the ROM, gait, and muscular strength of a simulated patient, document findings, and present a treatment plan.
- (7) The student evaluates ethical behavioral standards and legal responsibilities. The student is expected to:
- (A) describe the role of professional associations and regulatory agencies such as the American Physical Therapy Association, Texas Board of Physical Therapy Examiners, and the Federation of State Boards of Physical Therapy;
  - (B) examine physical therapy legal and ethical behavior standards such as the Health Insurance Portability and Accountability Act and examples of malpractice, negligence, and liability; and
  - (C) investigate the legal and ethical ramifications of unacceptable behavior in the physical therapy industry.
- (8) The student differentiates between the different levels of professional and safety requirements of the physical therapy workplace. The student is expected to:
- (A) evaluate and demonstrate the proper use of infection control to don and doff personal protective equipment (PPE);
  - (B) identify and describe the purpose of modalities in the physical therapy clinic;

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- (C) determine the appropriate use of clinical modalities such as cold, heat, electric stimulation, and ultrasound in a given physical therapy scenario; and
- (D) demonstrate proper form for therapeutic exercises such as long arc quad, plank, and bridge.

### Recommended Resources and Materials:

- Barrett, Christina M. *Dreeben-Irimia's Introduction to Physical Therapist Practice for Physical Therapist Assistants*. Burlington: Jones and Bartlett Learning, 2020.
- Texas Board of Physical Therapy Examiners. "Communique." *Executive Council of Physical Therapy and Occupational Therapy Examiners (ECPTOTE)*. 2021. <https://www.ptot.texas.gov/page/pt-newsletters>.
- Davis, Carol M., and Gina Maria Musolino. *Patient Practitioner Interaction: An Experiential Manual for Developing the Art of Health Care*. Thorofare: SLACK Incorporated, 2016.
- Fairchild, Sheryl L., Roberta Kuchler O'Shea, and Robin D. Washington. *Pierson and Fairchild's Principles & Techniques of Patient Care*. St. Louis: Elsevier, 2018.
- American Physical Therapy Association. "Get Moving, America!" *ChoosePT*. Accessed January 12, 2021. <https://www.choosept.com/Default.aspx>.
- Pagliarulo, Michael A. *Introduction to Physical Therapy, 6th ed.* St. Louis: Elsevier. 2021.
- American Physical Therapy Association. "Patient Stories: Lives Transformed by Physical Therapy." *ChoosePT*. November 12, 2015. <https://www.choosept.com/WhyTherapy/Stories.aspx#.VIMPYNKrT-s>.
- Executive Council of Physical Therapy and Occupational Therapy Examiners*. <https://www.ptot.texas.gov/page/act-and-rules>.
- Starkey, Chad. *Therapeutic Modalities*. Philadelphia: F.A. Davis Co., 2013.
- "The Federation of State Boards of Physical Therapy." *Ethics Articles: Learn about Standards of Ethical Behavior*. 2022. <https://www.fsbpt.org/Free-Resources/Ethics-Articles>.
- University of Nebraska Medical Center. *E-Gallery*. <https://www.unmc.edu/elearning/egallery/?s=physical+therapy>.

### Recommended Course Activities:

- SOAP note analysis
- Demonstrate how to talk to patients when completing patient history
- Create a stretch/exercise/rehab program for an area of the body
- Execute patient transfers using a gait belt
- Analyze case studies
- Analyze gait components such as step length, step width, and stride length.
- Demonstrate muscle strength testing on an area of the body

### Suggested methods for evaluating student outcomes:

- Review a patient file, develop a rehabilitation goal, and create an exercise/rehab plan to meet their patient goal (Summative)

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- Set up common modalities used in physical therapy such as a moist heat pack and a cold pack) (Formative)
- Role-play various patient communication scenarios to practice effective communication skills (Formative)
- Demonstrate the appropriate use of a gait belt and other assistive devices to safely transfer patients, and assist with sitting, standing, and ambulating (Summative)
- Interview a patient and create a concise and accurate history and physical document that summarizes the patient's history and exam findings (Summative)
- Write a resume (Summative)

### Teacher qualifications:

An assignment for Physical Therapy II is allowed with one of the following certificates.

- Health Science (Grades 6-12)
- Health Science Technology Education (Grades 8-12)
- Vocational health Occupations
- Vocational Health Science Technology

### Additional information:

Related work experience preferred:

- Physical therapist/assistant
- Occupational therapist/assistant
- Athletic trainer
- Rehabilitation aide
- Nurse