



Physical Therapy I

PEIMS Code: N1302128

Abbreviation: PHYTHER1

Grade Level(s): 10-12

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:

Physical Therapy I is designed to provide basic concepts, knowledge, and skills needed to work within physical therapy practice under the supervision of a licensed physical therapist/physical therapist assistant. Specifically, the course focuses on proper management of patient care to safely assist patients/therapists; management of equipment as it relates to physical therapy; strengthening and conditioning; and communication skills to work effectively within a physical therapy practice. This course is designed for students in grades 10, 11, or 12 who desire to work in a physical therapy clinic and/or advance to become a licensed physical therapist/physical therapist assistant.

Essential Knowledge and Skills:

- (a) General Requirements. This course is recommended for students in Grades 10, 11, and 12. Students shall be awarded one credit for successful completion of this course. Recommended prerequisites: Biology, Principles of Health Science or Principles of Allied Health, or Medical Terminology.
- (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) Physical Therapy I is designed to provide basic concepts, knowledge, and skills needed to work within physical therapy practice under the supervision of a licensed physical therapist/physical therapist assistant. Specifically, the course focuses on proper management of patient care to safely assist patients/therapists; management of

equipment as it relates to physical therapy; strengthening and conditioning; and communication skills to work effectively within a physical therapy practice. This course is designed for students in grades 10, 11, or 12 who desire to work in a physical therapy clinic and/or advance to become a licensed physical therapist/physical therapist assistant.

- (4) To pursue a career in the health science industry, students should recognize, learn 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 comprised 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 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) cooperate, contribute, and collaborate as a member of a team; and
 - (C) demonstrate soft skills associated with employment in a healthcare therapeutic career such as critical thinking, communication, collaboration, creativity, reliability, time management, and productivity.
 - (2) The student uses verbal, nonverbal, and written communication skills. The student is expected to:
 - (A) differentiate between the components of effective and non-effective communication;
 - (B) model effective communication skills for responding to the needs of individuals in a diverse society; and
 - (C) accurately report documentation concepts, including Subjective, Objective, Assessment and Plan (SOAP) notes.
 - (3) The student researches careers and career resources in physical therapy. The student is expected to:
 - (A) identify and discuss career options and employment information;

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- (B) analyze the impact of career decisions, including the causes and effects of changing employment situations;
 - (C) distinguish between academic preparation and skills necessary for employment as defined by the physical therapy profession; and
 - (D) compare and evaluate academic requirements for employment and professional advancement, including certifications, licensure, registration, continuing education, and advanced degrees.
- (4) The student demonstrates professional and safety requirements of the physical therapy workplace. The student is expected to:
- (A) explain the concept of integrated health care teams;
 - (B) evaluate the role of professional organizations in the preparation and governance of credentialing and certification;
 - (C) distinguish between different levels of isolation precautions and the appropriate personal protective equipment (PPE);
 - (D) demonstrate the proper use of infection control to don (put on) and doff (take off) personal protective equipment (PPE);
 - (E) demonstrate disinfection of patient care area and equipment following Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) guidelines; and
 - (F) analyze safety hazards in patient care areas according to Occupational Safety and Health Administration (OSHA).
- (5) The student uses appropriate medical terminology as it relates to the field of physical therapy. The student is expected to:
- (A) articulate common medical terms related to physical therapy, including levels of assistance;
 - (B) rank weight bear status by level using proper abbreviations related to physical therapy;
 - (C) identify and describe common surgical procedure terminology and medical abbreviations;
 - (D) associate various physical therapy assessments to patient care tests and measures such as range of motion (ROM), manual muscle testing (MMT), tone patterns, sensation, reflexes, clonus; and
 - (E) interpret a patient's medical history and physical exam results and communicate using conventional language the patient's therapy plan.
- (6) The student researches medical laws and ethics associated with physical therapy. The student is expected to:
- (A) demonstrate and evaluate the standards for safety, privacy and confidentiality of health information, including Health Insurance Portability and Accountability Act (HIPAA);
 - (B) compare and contrast the professional code of ethics and scope of practice for physical therapists and physical therapist assistants;

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- (C) explain principles of ethical behavior and confidentiality, including the consequences of breach of confidentiality;
 - (D) describe ethical issues related to physical therapy;
 - (E) research and explain issues related to malpractice, negligence, and liability as related to the practice of physical therapy;
 - (F) Identify the impact of local, state, and national regulatory agencies on the scope of practice of physical therapy careers;
 - (G) evaluate reimbursement of services as it relates to physical therapy; and
 - (H) identify and explain diversity and cultural practices influencing contemporary aspects of health care, including personal biases and patient care delivery.
- (7) The student investigates the structure and function of the human body. The student is expected to:
- (A) identify the body planes, directional and regional terms, quadrants, and cavities;
 - (B) analyze the basic structure and function of the human body systems, including skeletal, muscular, respiratory, circulatory, nervous, endocrine, urinary, digestive, immune/lymphatic, and integumentary;
 - (C) describe the nature of diseases and disorders, including etiology, signs, symptoms, risk factors, diagnosis, prognosis, complications, prevention, and physical therapy treatment options; and
 - (D) recognize and describe normal and abnormal range of motion.
- (8) The student demonstrates safe patient care skills specific to physical therapy. The student is expected to:
- (A) define and demonstrate bed mobility, including supine to sit, sit to supine, and rolling;
 - (B) define and demonstrate patient positioning and draping, including prone, supine, side lying, quadruped, tall kneeling, half kneeling, draping for warmth and patient modesty;
 - (C) identify patient positioning that would impair skin integrity and joint mobility;
 - (D) demonstrate transfers with use of a gait belt depending on patient needs, including one- and two- person transfers from bed to wheelchair using sit to stand, stand pivot, and slide board techniques;
 - (E) identify and assemble various types of wheelchairs and ambulatory aids, including proper fit, maintenance, and operation; and
 - (F) perform vital signs with activities specific to physical therapy such as cardiac testing, balance testing, and positional changes.
- (9) The student explains the safe use of modalities related to physical therapy. The student is expected to:
- (A) define the physical therapy biophysical agents, including acoustic, mechanical, thermal, and electromagnetic;
 - (B) differentiate between indications and contraindications for the modalities;

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- (C) describe basic set up of selected modalities; and
 - (D) analyze the clinical applications of the physical therapy modalities.
- (10) The student understands the basic concepts pertaining to gait. The student is expected to:
- (A) identify and describe the difference between walking and running gait patterns;
 - (B) identify normal gait sequence;
 - (C) compare normal to abnormal gait patterns such as Trendelenburg, hemiplegic, antalgic, and foot drop; and
 - (D) demonstrate proper guarding techniques such as sit to stand and bed to chair transfers.
- (11) The student describes the specialized needs of various populations. The student is expected to:
- (A) explain diagnoses pertaining to various populations, including neurological and orthopedic patients; that are common to physical therapy such as total hip replacement, anterior cruciate ligament tears, rotator cuff injuries, Parkinson’s Disease, and traumatic brain injuries;
 - (B) interpret research data as it relates to pediatrics, geriatrics, neurological, and orthopedics; and
 - (C) differentiate between age-specific diseases such as Hydrocephalus, torticollis, frozen shoulder, and osteoporosis.
- (12) The student explains the need for specialized equipment related to physical therapy. The student is expected to:
- (A) practice the safe use of specialized therapy equipment, including lifting equipment and operating exercise machines;
 - (B) discuss circumstances that require the use of specialized therapy equipment; and
 - (C) differentiate the contraindications, such as cancer, open wounds, pregnancy, and seizures, for the various specialized therapy equipment.
- (13) The student analyzes the importance of participation in extended learning experiences. The student is expected to:
- (A) participate in extended learning experiences such as community service, career and technical student organizations, and professional organizations; and
 - (B) create a plan of action targeting the career and technical student organization's community service goal.

Recommended Resources and Materials:

Barrett, Christina M. *Dreeben-Irimia's Introduction to Physical Therapist Practice for Physical Therapist Assistants*. Burlington, MA: Jones & Bartlett Learning, 2020.

“Communique.” PTOT.texas.gov, January 2021. <https://www.ptot.texas.gov/page/pt-newsletters>.

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Davis, Carol M., and Gina Maria. Musolino. *Patient Practitioner Interaction: an Experiential Manual for Developing the Art of Health Care*. Thorofare, NJ: 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, MO: Elsevier, 2018.

"Get Moving, America!" ChoosePT provided by APTA. Accessed January 12, 2021.

<https://www.choosept.com/Default.aspx>.

Pagliarulo, Michael A. *Introduction to Physical Therapy. 6th ed.* St. Louis, MO: Elsevier - Health Science, 2021.

"Patient Stories: Lives Transformed By Physical Therapy." American Physical Therapy Association, November 12, 2015. <https://www.choosept.com/WhyTherapy/Stories.aspx#.VIMPYNKrT-s>.

PTOT.texas.gov, January 12, 2021. <https://www.ptot.texas.gov/page/act-and-rules>.

Starkey, Chad. *Therapeutic Modalities*. Philadelphia, PA: F.A. Davis Co., 2013.

Recommended Course Activities:

- SOAP notes
- Line management
- Breakdown wheelchairs and other equipment.
- Demonstrate how to talk to patients when completing a patient history and physical.
- Create a stretch/exercise/rehab program for an area of the body.
- Transfer patient using a gait belt.
- Use and interpret numerical rating and Wong-Baker Faces pain scales.
- Analyze case studies.
- Measure gait components: step length, step width, stride length, etc.

Suggested methods for evaluating student outcomes:

- Students will review a patient file, develop a rehabilitation goal, and create an exercise/rehab plan to meet their patient goal. (Summative)
- Students will set up and break down common equipment used in Physical Therapy. (e.g. wheelchair and other equipment) (Formative)
- Students will role-play various patient communication scenarios to practice effective communication skills. (Formative)
- Students will demonstrate the appropriate use of a gait belt and other assistive devices to safely transfer patients, assist with sitting, standing, and ambulating. (Summative)
- Students will interview a patient and create a concise and accurate history and physical document that summarizes the patient's history and exam findings. (Summative)
- Students successfully identifies what role the line/tube is serving in the patient, the specific precautions related to it, and positions the patient/environment to manage the line/tube during mobility with minimal disruptions during patient mobility. (Formative)

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Teacher qualifications:

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

- Health Science 6-12.
- Health Science Technology Education 8-12.
- Vocational health Occupations.
- Vocational Health Science Technology.

Related work experience preferred:

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

Additional information: