

# PHYSICAL THERAPY- UNDERGRAD (PTBS)

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## **PTBS 50000 Documentation for Physical Therapy (NLA)**

Introduction to written documentation of physical therapy services using the APTA Patient/Client Management Model and the International Classification of Functioning, Disability and Health Model. Topics include written documentation of initial examinations, progress notes, and discharges; legal guidelines; medical terminology; and electronic health record. (U,Y)

1 Credit

## **PTBS 50100 Human Anatomy (NLA)**

Human Anatomy is the study of the gross anatomical components of the human body through the use of lecture and cadaver dissection. Emphasis is placed on the musculoskeletal and neurovascular systems found in the extremities, trunk, chest, and abdominal walls, and in the head and neck.

Prerequisites: PTBS 31400. (U,Y)

6 Credits

## **PTBS 50200 Musculoskeletal I (NLA)**

Application of the patient/client management model with emphasis on examination, evaluation, and diagnosis of musculoskeletal problems of the extremities. Emphasis is placed on the following skills: patient history, joint integrity and mobility, goniometry, muscle performance testing, flexibility testing, ligament testing, special orthopedic tests, and posture as it relates to the extremities. Prerequisites: PHYS 10100, PHYS 10200, and PTBS 50100. (F,Y)

4 Credits

## **PTBS 50300 Soft Tissue Examination and Interventions (NLA)**

This lecture and laboratory course examines various methods of soft tissue examination and intervention. It is designed to expose the student to a broad spectrum of techniques, while teaching the skills of the most commonly used methods. Some of the techniques are more scientifically evidence based than others. The course will emphasize critical assessment and foster the necessity for research-based analysis. The course is also designed to develop the student's palpation skills, including the examination and evaluation of soft tissue dysfunction.

Prerequisites: PTBS 50100. (F,Y)

2 Credits

## **PTBS 50400 Applied Biomechanics (LA)**

Application of mechanical principles to human movement with particular attention to the effect of forces in producing normal movement. Students are required to apply their knowledge of anatomy to understanding individual joint function, as well as the integrated function of several joints during complex activities such as the normal gait. Prerequisites: PTBS 50100. (F,Y)

3 Credits

## **PTBS 50500 Professional Development II (NLA)**

Introduction to the Practice Act, roles of paraprofessionals, professional and ethical behavior, and effective communication styles. Instruction in clinical education teams, models of clinical education, and assessment of clinical performance. Prerequisites: PTBS 40100. (S,Y)

Attributes: CP

1 Credit

## **PTBS 50600 Medical Screening I (NLA)**

This course covers the principles and interpretation of diagnostic testing. Students will become competent in understanding radiologic interpretations of X-rays, Computed Tomography, MRI, Nuclear, ultrasound imaging and nerve conduction testing. Radiographic anatomy, densities, views, and structural analysis are taught using digital imaging. Patient cases will be used to compare patho-structural diagnosis with actual symptoms and clinical presentation. Prerequisites: PTBS 31400. (F,Y)

1 Credit

## **PTBS 50700 Integrated Clinical Experience I (NLA)**

Work with patients under the supervision of a faculty member. Apply knowledge and skills to assume appropriate responsibilities in direct patient care. (B,S,Y)

1 Credit

## **PTBS 50800 Evidence Based Practice I (NLA)**

Explore how research literature can guide clinical decision making and form the basis for contemporary physical therapist practice. Emphasize how evidence is used to answer clinical questions that affect the examination process, evaluation procedures, and interventions commonly used by physical therapists. Examine the historical background for evidence based practice. Analyze the fundamental components of evidence based practice. Prerequisites: MATH 14400, MATH 14500, MATH 15500, MATH 21600 or PSYC 20700; and PTBS 50100. (S,Y)

3 Credits

## **PTBS 50900 Integrated Clinical Experience II (NLA)**

This second clinical education experience provides students with an opportunity to work with patients under the supervision of a faculty member in a diverse experience. Students will apply knowledge and skills and assume appropriate responsibilities in direct patient care. Pass/Fail only. Prerequisites: PTBS 50700. (S,Y,B)

1 Credit

## **PTBS 51000 Joint Mobilization (NLA)**

Lecture and laboratory course that provides an evidence based manual therapy approach toward evaluation and management of musculoskeletal conditions using joint mobilization. Emphasis will be on enhancing the student's clinical reasoning and manual therapy skills. Prerequisites: PTBS 50200 and PTBS 50300. (S,Y)

2 Credits

## **PTBS 51002 Human Anatomy**

Study of the gross anatomical components of the human body through the use of lecture and cadaver dissection. Emphasis is placed on the musculoskeletal and neurovascular systems found in the extremities, trunk, chest, and abdominal walls, and in the head and neck.

Prerequisites: BIOL-20600. (Sum,Y)

6 Credits

## **PTBS 51100 Therapeutic Exercise (NLA)**

A comprehensive analysis of the scientific principles of exercise commonly used in physical therapy practice. Specific exercise programs will be discussed, as well as adaptations of tissue to activity and immobilization. Prerequisites: PTBS 50200 and PTBS 50400. (S,Y)

3 Credits

**PTBS 51103 Pathology for Physical Therapists (LA)**

Examination of the components of general disease and injury processes and specific components of selected diseases likely to be encountered in physical therapy practice. General pathology topics described include cell and tissue injury, inflammation, and the healing and repair process. Specific focus on diseases of the musculoskeletal, cardiovascular, pulmonary, integumentary, and nerve systems. Emphasis is placed on understanding the underlying mechanisms of structural and functional disruptions for adults, with secondary comparisons to pathology across the life span. This course provides background information necessary for performing differential diagnosis and patient treatments. Prerequisites: PTBS 51002; PTBS 31300. (S,Y)

3 Credits

**PTBS 51200 Acute Care (NLA)**

This course will provide students with the knowledge related to and skills required in the acute care setting. Students will develop competency in acute care evaluations, interventions, and discharge planning. Both didactic and laboratory activities will be used to integrate curricular content to address the complex patient and dynamic environment encountered in acute care. Prerequisites: PTBS 40000. (F,Y)

2 Credits

**PTBS 51300 Electrotherapeutic Modalities and Physical Agents (NLA)**

The study of the biophysical, physiological, and clinical principles and procedures associated with the application of electromagnetic and acoustic energy in the clinical management of pathological conditions. Prerequisites: PHYS 10100, PHYS 10200, and PTBS 50100. (S,Y)

3 Credits

**PTBS 51400 Medical Screening II (NLA)**

Builds on the principles introduced in Medical Screening I allowing the students to integrate these principles into an efficient and effective patient examination. A systematic approach to evaluating a patient's history and performing a systems review allows students to identify risk factors, red flags, visceral pain patterns, and constitutional symptoms that warrant a medical referral. Decisions for recommending lab tests or imaging are based on specific medical conditions and current appropriateness criteria. Prerequisites: PTBS 50600. (S,Y)

2 Credits

**PTBS 51500 Health Care Systems (NLA)**

This course familiarizes students with the basic constructs of the U.S. health care system, with emphasis on how system components influence patient referrals, delivery of care, reimbursement, and outcomes. Prerequisites: PTBS 40100. (S,B,Y)

1 Credit

**PTBS 51600 Mobility Training (NLA)**

Introduces patient/client care techniques related to mobility training including bed mobility, transfer training, gait training with a variety of assistive devices, elevation training, and wheelchair mobility. Familiarizes students with the initial steps in the patient-therapist relationship including professional behaviors and oral communication. Review of cardiovascular systems is also included. Develops the skills necessary to ensure the safety of both the patient/client and the student/therapist in a clinical environment. Prerequisites: PTBS 50100. (F,Y)

1 Credit

**PTBS 51700 Professional Development I (NLA)**

Introduces professionalism including professional and ethical behavior, as well as our professional organization. Develops effective listening skills. Prepares to teach in a variety of settings and formats for academic, clinical, and professional purposes. Includes teaching/learning theories and styles, ability to adapt teaching for a variety of audiences, domains of learning, instructional objectives, teaching methods, instructional technology, and feedback. Prerequisites: PTBS 50100. (F)

1 Credit

**PTBS 51800 Pathology for Physical Therapists (NLA)**

Examines the components of general disease and injury processes and specific components of selected diseases likely to be encountered in physical therapy practice. Describes general pathology topics including cell and tissue injury, inflammation, and the healing and repair process. Focuses specifically on diseases of the musculoskeletal, cardiovascular, pulmonary, integumentary, and nerve systems. Emphasizes understanding the underlying mechanisms of structural and functional disruptions for adults, with secondary comparisons to pathology across the life span. Provides background information necessary for performing differential diagnosis and patient treatments that will be taught in future coursework. Prerequisites: PTBS 50100. (F,Y)

3 Credits

**PTBS 52102 Musculoskeletal Examination and Evaluation (NLA)**

Introduction to the patient/client management model with emphasis on examination, evaluation, and diagnosis of musculoskeletal problems of the extremities. Emphasis is placed on the following skills: patient history, range of motion, goniometry, muscle performance testing, flexibility testing, ligament testing, special orthopedic tests, and posture as it relates to the extremities. Prerequisites: PHYS 10100; PHYS 10200; PTBS 51002. (F,Y)

3 Credits

**PTBS 52203 Soft Tissue Palpation and Examination (NLA)**

This lecture and laboratory course examines various methods of soft tissue examination and intervention. It covers a broad spectrum of techniques while teaching the skills of the most commonly used methods. Some of the techniques are more scientifically evidence-based than others. The course emphasizes critical assessment and the need for research-based analysis. It develops palpation skills, including the examination and evaluation of soft tissue dysfunction. Prerequisite: PTBS 51002. Corequisites: PTBS 52102; PTBS 53702. (F,Y)

2 Credits

**PTBS 52304 Peripheral Joint Mobilization (NLA)**

Lecture and laboratory course preparing students to incorporate passive mobility testing into the patient/client examination. Students also learn to use passive joint mobilization interventions for patient/client with peripheral joint pathologies. Prerequisites: PTBS 52102; PTBS 52203. (S,Y)

1.5 Credits

**PTBS 52405 Therapeutic Exercise (NLA)**

A comprehensive analysis of the scientific principles of exercise commonly used in physical therapy practice. Specific exercise programs address muscle performance, endurance, mobility, and balance impairments. Adaptations of tissue on activity and immobilization are also discussed. Prerequisites: PTBS 31300; PTBS 52102; PTBS 53702. (S,Y)

3 Credits

**PTBS 53101 Electrotherapeutic Modalities and Physical Agents (NLA)**

The study of the biophysical, physiological, and clinical principles and procedures associated with the application of electromagnetic and acoustic energy in the prevention and treatment of pathological conditions. Prerequisites: PHYS 10100; PHYS 10200; PTBS 51002. (S,Y) 4 Credits

**PTBS 53702 Applied Biomechanics (LA)**

Application of mechanical principles to human movement. Particular attention to the effect of forces in producing normal movement. Students are required to apply their knowledge of anatomy to understanding individual joint function, as well as the integrated function of several joints during complex activities such as the normal gait. Prerequisites: PHYS 10100; PHYS 10200; PTBS 51002. (F,Y)

Attributes: NS

3 Credits

**PTBS 54001 Professional Development I (NLA)**

Description of physical therapy as a profession in the United States, including history, professional organization, roles of the physical therapist and related personnel, and scope of practice. Prerequisites: Senior standing. (F,Y)

.5 Credit

**PTBS 54102 Preclinical Conference I (NLA)**

Series of sessions to explain clinical education policies and procedures and choose sites for clinical affiliations. Prerequisites: Senior standing; clinical health studies major. Pass/fail only. (Su,Y)

0 Credit

**PTBS 54203 Professional Development II (NLA)**

Introduction to the Practice Act, Code of Ethics, roles of paraprofessionals, professional and ethical behavior, and effective communication styles. Instruction in clinical education teams, models of clinical education, and assessment of clinical performance. Corequisite: PTBS 55501. Prerequisites: PTBS 54001. (S,Y)

Attributes: CP

1 Credit

**PTBS 55501 Teaching and Learning in the Clinical Setting (NLA)**

Preparation to teach in a variety of settings and formats for academic, clinical, and professional purposes. Content is applicable to community presentations, group in-services, and presentations, as well as patient/family and other individualized teaching. Includes teaching/learning theories and styles, impact of age, culture, environment, and motivation, domains of learning, instructional objectives, teaching methods, and instructional technology. Evaluation, feedback, and outcome measurements are included. (S,Y)

1 Credit

**PTBS 59000-59005 Selected Topics in Physical Therapy (NLA)**

Clinical and professional topics of current interest to faculty and students. This course may be repeated for credit for different selected topics. Pre-requisites: As appropriate to topics. Pass/fail only. (IRR)

0-3 Credits

**PTBS 59800 Honors Seminar in Physical Therapy (NLA)**

For students in the honors program. Research proposals completed in PTBS 59900 are presented and critiqued. In addition, examples of good and poor published journal articles are discussed and analyzed. Prerequisites: PTBS 59900. Note: All undergraduates taking this course for graduate credit must satisfy the conditions listed under "Course Levels." (S,Y)

1 Credit

**PTBS 59900 Honors Project (NLA)**

For the exceptional student who wishes to pursue graduate research. Results will be summarized in a research proposal, which is a preliminary step toward a graduate thesis. Prerequisites: PTBS 41000; permission of department chair. Note: All undergraduates taking this course for graduate credit must satisfy the conditions listed under "Course Levels." (F,Y)

3 Credits