

PHYSICAL THERAPY

College of Health and Human Services

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Graduate Programs

Master of Physical Therapy

This program consists of 60-units preceded by a year of upper division prerequisites offered at the University. Applicants must have a bachelor's degree and have completed specific lower division prerequisites. Following didactic course work, students complete a 24-week internship required for state licensure.

The MPT degree at California State University, Long Beach is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA).

Requirements

Complete all prerequisites with a minimum of "C" and earn a minimum grade-point average of 3.0 in upper-division prerequisites with a minimum of "B" in HHS 401 and BIOL 341.

Prerequisites

Natural Sciences:

Take all of the following:

CHEM 111A General Chemistry (5)

Prerequisites: A passing score on the Chemistry Placement Examination. Credit in CHEM 101 does not substitute for a passing score on the Chemistry Placement Examination and a "C" or better in MATH 113 or 117 or 119A or 122. One year of high school chemistry is strongly recommended. (Recommended for students who intend to pursue careers in science or engineering.)

CHEM 111B General Chemistry (5)

Prerequisites: CHEM 111A with a grade of "C" or better.

PHYS 100A General Physics (4)

Prerequisites: MATH 109 or 113 or 117 or 119A or 120 or 122.

PHYS 100B General Physics (4)

Prerequisites: PHYS 100A.

Biological Sciences:

Take all the following courses:

BIOL 208 Human Anatomy (4)

Prerequisites: GE Foundation requirements.

BIOL 211 Introduction to Evolution and Diversity (4)

Prerequisites: Open only to students who have successfully completed the equivalent of the lecture component of BIOL 211 at another accredited institution and have consent of the Department of Biological Sciences.

BIOL 212 Intro to Cell and Molecular Biology (4)

Prerequisites: Completion of BIOL 211 and CHEM 111A with grade of "C" or better.

BIOL 341 Physiology for Therapists I (4)

Prerequisites: BIOL 211, 212, 213 all with grade of "C" or better. Recommended: PHYS 100A, B.

BIOL 441 Physiology for Therapists II (3)

Prerequisites: BIOL 341 with a grade of "C" or better.

HHS 401 Applied Anatomy I (3)

Prerequisites: BIOL 208, or equivalent.

HHS 402 Applied Anatomy II (3)

Prerequisites: BIOL 208, or equivalent; "B" or better in HHS 401.

HHS 403 Tissue Mechanics and Aging (3)

Prerequisites: "B" or better in HHS 401 and BIOL 341 and consent of instructor.

HHS 460 Neuroanatomy (4)

Prerequisite: BIOL 341.

HHS 471 Pathology (3)

Prerequisites: BIOL 208; Corequisites: BIOL 341.

Take either the following course:

BIOL 207 Human Physiology (4)

Prerequisites: GE Foundation Requirements.

or

BIOL 213 Intro to Ecology and Physiology (4)

Prerequisites: BIOL 211, 212; CHEM 111B with a grade of "C" or better.

Biostatistics:

Take the following:

BIOL 260 Biostatistics (3) (preferred)

Prerequisites: BIOL 211 or BIOL 207 or MICR 200; MATH 111 or 113 or 119A or 122 all with a grade of "C" or better.

Behavioral Sciences:

Take both of the following:

PSY 100 General Psychology (3)

Prerequisites/Corequisites: GE A1 requirement.

HHS 374 Professional Practice I: Interactions (3)

Prerequisites: Consent of instructor.

Core

Take all of the following courses:

PT 501 Musculoskeletal & Biomechanical Principles (4)

Prerequisites: HHS 401, 402, 403.

PT 502 Pathological Gait (1)

Prerequisites: PT 501.

PT 503 Management of Individuals with Musculoskeletal Disorders I (3)

Prerequisites: PT 501.

PT 504 Management of Individuals with Musculoskeletal Disorders II (4)

Prerequisites: PT 501, 503.

PT 505 Management of Human Growth and Dev (2)

Prerequisites: HHS 401, 460.

PT 506 Exercise Physiology for Physical Therapy (2)

Prerequisites: BIOL 341, 441; HHS 401, 460, 471.

PT 507 Examination of Individuals with Neuromuscular Disorders (2)

Prerequisites: HHS 460.

PT 508 Management of the Pediatric Population (2)

Prerequisites: PT 505, 507.

PT 509 Management of the Cardiopulmonary System (3)

Prerequisites: BIOL 341, 441; PT 505, 506.

PT 510 Patient Management & Functional Training (2)
Prerequisites: HHS 401, 402 and admittance to MPT program.

PT 511 Management of the Geriatric Population (3)
Prerequisites: PT 503, 504, 505, 507.

PT 512 Clinical Electrophysiology I (3)
Prerequisites: BIOL 341; HHS 402, 460.

PT 513 Clinical Electrophysiology II (2)
Prerequisites: PT 512.

PT 515 Management of Individuals with Neuromuscular Disorders (2)
Prerequisites: PT 507; Corequisites: PT 523.

PT 522 Clinical Practice I (1)
Prerequisites: PT 503, 507, 509, 510.

PT 523 Clinical Practice II (1)
Prerequisites: PT 522; Corequisites: PT 515.

PT 524 Clinical Practice III (1)
Prerequisites: PT 507, 515, 523; Corequisites: PT 608.

PT 574 Professional Practice Issues (2)
Prerequisites: HHS 374.

PT 604 Health Care Issues I (2)
Prerequisites: Admittance to MPT program.

PT 605 Health Care Issues II (2)
Prerequisites: Admittance to MPT program.

PT 607 Seminar in Cardiopulmonary Clinical Decision Making (1)
Prerequisites: PT 509.

PT 608 Neurologic Clinical Decision Making (1)
Prerequisites: PT 507.

PT 620 Management of Patients with Orthotic and Prosthetic Needs (2)
Prerequisites: PT 502, 503.

PT 622 Clinical Pathophysiology (3)
Prerequisites: PT 504, 505, 507, 509, 510, 513.

PT 674 Clinical Problem Solving (1)
Prerequisites: PT 574.

PT 696 Research Methods (2)
Prerequisites: Admittance to MPT Program.

Take a total of 4 units of one of the following in semesters 2, 3, and 4:

PT 697 Directed Research Studies (1-4)
Prerequisites: PT 574, 696, advancement to candidacy and consent of instructor.

PT 698 Research Thesis/Project (1-4)
Prerequisites: PT 574, 696, advancement to candidacy and consent of instructor.

Take at least one of the following electives:

PT 590, 611, 619

Admission

The physical therapy masters program is open to all college graduates who have met prerequisite requirements and demonstrate academic promise and ability to perform at a satisfactory level during their graduate studies. Application deadline is January 14 for fall admission.

To be considered for acceptance into the graduate program, the applicant must:

1. Complete all prerequisite courses with a minimum of "C" and a minimum grade point average of 3.0 in all upper-division prerequisites with a minimum of "B" in HHS 401 and BIOL 341;

2. Hold, or be eligible to hold, an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by an appropriate campus authority;
3. Have attained a grade point average of at least 2.5 (A=4.0) in the last 60 semester (90 quarter) units attempted;
4. Submit results of the General Aptitude Section of the Graduate Record Examination (quantitative, verbal, and analytical), taken within the past 5 years;
5. Provide academic and personal references as required;
6. Provide documentation of personal experience in a variety of physical therapy settings; and
7. Be recommended by the physical therapy faculty.
8. All candidates whose preparatory education was principally in a language other than English must demonstrate competency in English. Refer to the CSULB Bulletin for requirements for completing the Test of English as a Foreign Language (TOEFL).

The master's degree program is a 60-unit, four semester plus one summer session, full-time course of study followed by an internship of 12 units. The course of study is most appropriate for graduates with degrees in related fields but does not exclude the person holding a baccalaureate degree in physical therapy. Course work is designed for entry-level professional study.

Advancement to Candidacy

1. Classified graduate student status.
2. Fulfillment of the Graduation Writing Assessment Requirement (GWAR).
3. A minimum 3.0 grade-point average in all program graduate work as well as a minimum overall 3.0 in all graduate work attempted.
4. Be recommended by a faculty sponsor.
5. Enrollment in regular session.
6. Satisfactory completion of at least one semester of the program.

Admittance to Clinical Practice

1. Complete all requirements for the master's at the time of application to clinical practice.
2. Successfully complete one of the following:
 - A. Research Thesis or Project (PT 698)
 - B. Directed Studies (PT 697) with faculty advisor guidance.
3. If choice B (above) is selected, student must also successfully complete a comprehensive examination.

Internship Requirements

Take 12 units of the following which must be completed to be eligible to take the state examination for licensure:

PT 525 Clinical Internship I (3)
Prerequisites: Completion of all requirements for the MPT degree.

PT 526 Clinical Internship II (3)
Prerequisites: Completion of all requirements for the MPT degree.

PT 527 Clinical Internship III (3)
Prerequisites: Completion of all requirements for the MPT degree.

Doctoral Programs

Doctor of Physical Therapy

The program is designed to prepare the student for entry-level doctoral practice as a physical therapist. Graduates are employed in a variety of settings, including hospitals, rehabilitation centers and private physical therapy clinics. The Doctor of Physical Therapy program is open to all college graduates who have met prerequisite requirements and demonstrate sufficient preparation, potential for professional education and ability to perform the essential functions needed to practice as a physical therapist as determined by physical therapy faculty review of admission documents. Admission shall be granted on a competitive basis; meeting the admission requirements qualifies an individual for, but does not guarantee admission to the program.

Admission Requirements

1. Complete the university application to be admitted with graduate standing by the deadline of December 30 and complete the PTCAS application by the application deadline November 1 for summer admission the following year.
2. Submit to the university and PTCAS results of the General Aptitude Section of the Graduate Record Examination (quantitative, verbal, and analytical), taken within the past 5 years, and have earned at least a 4.0 on the Analytical Writing Component Score of the examination.
3. Provide PTCAS with three letters of recommendation attesting to the potential for success as a physical therapist and/or the scholarly potential of the applicant;
 - At least one letter must be from a physical therapist with whom the applicant had a professional association, and
 - One from a professor for a prerequisite course which the applicant completed.
 - If the applicant previously has been employed, the third letter should be from an employer.
 - If the applicant previously has not been employed, the third letter should be from a physical therapist with whom the applicant had a professional association.
4. Provide documentation of knowledge of physical therapy through a minimum of 100 documented hours of paid or volunteer experience under the direct supervision of a licensed physical therapist; and
5. Provide a written statement of purpose reflecting the applicant's commitment to physical therapy.
6. Meet prerequisite requirements.

Prerequisites

1. Hold, or be eligible to hold, an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by an appropriate campus authority, by the end of the spring semester prior to admission to the program.

2. Have attained a grade point average of at least 3.0 (A=4.0) with at least 2.5 in the last 60 semester (90 quarter) units attempted,
3. Have been in good academic, professional, and clinical standing at the last institution and if applicable in the last entry-level physical therapist educational program attended,
4. Successfully have completed the following courses with a minimum of "C" and a minimum grade point average of 3.0 by the end of the fall semester prior to the year of admission to the program. No course may be repeated more than once and no more than 3 prerequisite courses may be repeated. CR/NC grades, correspondence courses, or independent study courses cannot be used for prerequisite requirements. Only 2 classes may be in progress during the fall semester of application.

Natural Sciences:

Take all of the following courses:

CHEM 111A General Chemistry (5)

Prerequisites: A passing score on the Chemistry Placement Examination. (Credit in CHEM 101 does not substitute for a passing score on the Chemistry Placement Examination) and a "C" or better in MATH 113 or 117 or 119A or 122. One year of high school chemistry is strongly recommended. (Recommended for students who intend to pursue careers in science or engineering).

CHEM 111B General Chemistry (5)

Prerequisite: CHEM 111A with a grade of "C" or better.

PHYS 100A General Physics (4)

Prerequisite: MATH 109 or 113 or 117 or 119A or 120 or 122. PHYS 100A is a prerequisite for PHYS 100B.

PHYS 100B General Physics (4)

Prerequisite: MATH 109 or 113 or 117 or 119A or 120 or 122. PHYS 100A is a prerequisite for PHYS 100B.

Biological Sciences:

Take all of the following courses:

BIOL 208 Human anatomy (4)

Prerequisites: GE Foundation requirements.

BIOL 211 Introduction to Evolution and Diversity (4)

Prerequisite/Corequisite: CHEM 111A with a grade of "C" or better.

BIOL 212 Introduction to Cell & Molecular Biology (4)

Prerequisites: Completion of BIOL 211 and CHEM 111A with grades of "C" or better.

Take either the following courses:

BIOL 207 Human Physiology (4)

Prerequisites: GE Foundation requirements.

or

BIOL 213 Introduction to Ecology and Physiology (4)

Prerequisites: BIOL 211, 212, CHEM 111B, each with a grade of "C" or better.

Biostatistics:

Take the following:

BIOL 260 Biostatistics (3) (preferred)

Prerequisites: BIOL 211 or BIOL 207 or MICR 200; MATH 111 or 113 or 119A or 122 all with a grade of "C" or better.

Behavioral Sciences:

Take the following:

PSY 100 General Psychology (3)

Prerequisite/Corequisite: GE A1 requirement.

Admission shall be granted on a competitive basis; meeting the admission requirements qualifies an individual for, but does not guarantee admission to the program.

Retention

1. Maintain a 3.0 or better grade point average in all graduate work completed.
2. Make continuous satisfactory progress toward the degree objective.

Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy.
2. Obtain classified status.
3. Have earned a minimum 3.0 grade-point average in all program graduate work as well as a minimum overall 3.0 in all graduate work attempted.
4. Fulfill the Graduation Writing Assessment Requirement (GWAR) by earning a 4.0 on the Analytical Writing Component Score of the GRE.
5. Complete a minimum of one semester (fall session) of graduate level coursework in the program.
6. Be enrolled during the term in which advancement to candidacy takes place.
7. Obtain approval for one's individual program plan from a faculty Doctoral Project sponsor, the Graduate Advisor and the Associate Dean of the College of Health and Human Services.

Qualifying Assessment

1. Successfully complete the Doctoral Project Proposal Paper and Oral Presentation.
2. Advance to candidacy.
3. Earn good standing in the clinical education program (beginner status on clinical Performance Instrument [CPI] for D.P.T. 781).
4. Demonstrate adherence to the essential physical, emotional and professional practice expectations of a physical therapist in the classroom and clinic (entry level on CPI skills 1 and 2 for D.P. T 781, acceptable practice in D.P.T. 731, 733 and 741).

Degree Requirements

The Doctor of Physical Therapy degree program is a 113-unit, three year, full-time cohort program including summer sessions that includes an internship of 12 units.

Core Coursework

Take all of the following courses:

- DPT 701 Anatomy for Physical Therapy I (3)
Prerequisites: BIOL 208 and admission to DPT program.
- DPT 702 Anatomy for Physical Therapy II (3)
Prerequisite: DPT 701.
- DPT 703 Neuroanatomy (3)
Prerequisite: DPT 701. Corequisite: DPT 702.
- DPT 704 Tissue Mechanics (2)
Corequisite: DPT 701.
- DPT 705 Biomechanical Principles (3)
Prerequisites: DPT 701, 702, 704.
- DPT 706 Physiology for Therapists (6)
Prerequisite: Admission to the DPT program.
- DPT 707 Physical Therapy across the Life Span (2)
Prerequisites: DPT 701, 702 and 703.
- DPT 708 Motor learning and Motor Control (2)
Prerequisite: Admission to DPT program.
- DPT 709 Exercise Science for Physical Therapy (3)
Prerequisites: DPT 701, 704, 706.

DPT 710 Pathology for Physical Therapy (3)
Prerequisite: Admission to DPT program.

DPT 720 Professional Interactions (3)
Prerequisite: Admission to DPT program.

DPT 721 Professional Practice Issues (2)
Prerequisite: DPT 720.

DPT 722 Critical Thinking for Physical Therapy (1)
Prerequisites: DPT 720, 721.

DPT 731 Physical Therapy Principles of Acute Care (2)
Prerequisites: DPT 701, 702, 703.

DPT 732 Examination of Individuals with Musculoskeletal Disorders (3)
Prerequisite: DPT 705.

DPT 733 Interventions for Individuals with Musculoskeletal Disorders (4)
Prerequisites: DPT 705, 732.

DPT 734 Advanced Management of Individuals with Musculoskeletal Disorders (2)
Prerequisites: DPT 705, 732, 733.

DPT 735 Normal and Pathological Gait (2)
Prerequisite: DPT 705.

DPT 736 Management of Individuals with Orthotic and Prosthetic Needs (2)
Prerequisites: DPT 732, 735.

DPT 740 Evaluation of Individuals with Neuromuscular Disorders (2)
Prerequisite: HHS 460.

DPT 741 Intervention for the Individual with Neuromuscular Disorders I (2)
Prerequisites: DPT 740; Corequisite: DPT 782.

DPT 742 Intervention for the Individual with Neuromuscular Disorders II (1)
Prerequisites: DPT 740, DPT 741. Corequisite: DPT 783.

DPT 743 Electroneuromyographic Management I (2)
Prerequisites: DPT 702, 703.

DPT 744 Electroneuromyographic Management II (2)
Prerequisite: DPT 743.

DPT 745 Management of the Pediatric Population (2)
Prerequisites: DPT 707, 740.

DPT 746 Advanced Management of Individuals with Neuromuscular Disorders (1)
Prerequisites: DPT 740, 741, 742.

DPT 750 Imaging for Physical Therapists (2)
Prerequisites: PT 710, 732.

DPT 751 Pharmacology for Physical Therapists (2)
Prerequisite: Admission to DPT program.

DPT 752 Differential Diagnosis for Physical Therapists (2)
Prerequisites: DPT 743, 750, 751.

DPT 760 Management of Individuals with Cardiopulmonary Disorders (3)
Prerequisites: DPT 706, 709.

DPT 765 Management of Individuals with Integumentary Disorders (2)
Prerequisite: DPT 710.

DPT 766 Prevention and Wellness (2)
Prerequisites: DPT 733, 745, 760.

DPT 767 Management of the Geriatric Population (3)
Prerequisites: DPT 733, 734, 745, 760.

DPT 768 Clinical Pathophysiology (3)
Prerequisites: DPT 707, 710, 731, 750, 751, 752.

DPT 769 Advanced Management of Individuals with Cardiopulmonary Disorders (1)
Prerequisite: DPT 760.

DPT 770 Health Care Delivery I (2)

Prerequisites: DPT 721, 722.

DPT 771 Health Care Delivery II (2)

Prerequisite: DPT 770.

DPT 781 Clinical Practice I (3)

Prerequisites: DPT 731, 732, 735, 740.

DPT 782 Neuromusculoskeletal Practice I (1)

Prerequisite: DPT 740. Corequisite: DPT 741.

DPT 783 Neuromusculoskeletal Practice II (1)

Prerequisite: DPT 782. Corequisites: DPT 742, 744.

DPT 784 Clinical Practice II (3)

Prerequisites: DPT 733, 734, 741, 742, 760, 781.

DPT 796 Research Methods (2)

Prerequisite: Admission to DPT program.

Take a total of 6 units of each of the following:

DPT 785 Clinical Internship I (3)

Prerequisites: DPT 752, 781, 784.

DPT 786 Clinical Internship II (3)

Prerequisites: DPT 781, 784, 785.

Take a total of 4 units of the following:

DPT 797 Doctoral Project (1-4)

Prerequisite: DPT 796.

Requirements for Clinical Coursework

Criminal background check, health insurance, titers and immunizations, medical clearance, malpractice insurance, CPR certification (lifesaving course with lab), and adhering to the department essential functions are required for clinical coursework.

Admittance to Clinical Internship

1. Successfully complete the comprehensive examination.
2. Successfully complete 4 units of a Doctoral Project (DPT 797)

Physical Therapy Courses (P T)

501. Musculoskeletal and Biomechanical Principles (4)

Prerequisites: HHS 401, 402, 403.

Advanced study of joint mechanics and pathomechanics with application to therapeutic procedures, posture and movement of the limbs, temporomandibular joint, neck and trunk. Includes normal gait.

Letter grade only (A-F). (Lecture/discussion 3 hours, laboratory 3 hours)

502. Pathological Gait (1)

Prerequisite: PT 501

Kinetics and kinematics of pathological gait with application to persons with gait disability. Emphasis is on gait analysis and problem solving causes of deviations.

Letter grade only (A-F). (Laboratory 3 hours)

503. Management of Individuals with Musculoskeletal Disorders I (3)

Prerequisite: PT 501.

Physical therapy evaluative process for patient/clients with musculoskeletal disorders including examination, evaluation, diagnosis, prognosis, including anticipated goals, expected outcomes, criteria for discharge and reexamination.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours)

504. Management of Individuals with Musculoskeletal Disorders II (4)

Prerequisites: PT 501, 503.

The interventions for individuals with disorders of the musculoskeletal system including exercise prescription, strengthening regimens, effects of disuse, life sequence, wellness and prevention, theories of pain and pain management and selected preferred practice patterns provided by physical therapists.

Letter grade only (A-F). (Lecture/discussion 3 hours, laboratory 3 hours)

505. Management of Human Growth and Development (2)

Prerequisites: HHS 401, 460.

Investigation and analysis of human development across the lifespan with emphasis on body systems contributing to the development of movement. Also addresses health risks, preventive strategies and wellness, including gender issues.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

506. Exercise Physiology for Physical Therapy (2)

Prerequisites: BIOL 341, 441; HHS 401, 460, 471.

Study of systems critical for patient management that are challenged and altered by exercise in health and pathology. Includes exercise measurement, test design, equipment, and pharmacology of exercise.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

507. Examination of Individuals with Neuromuscular Disorders (2)

Prerequisite: HHS 460.

Physical therapist evaluative process for patient/clients with neuromuscular disorders. Includes examination (task and movement analysis, tests and measures for body structure and function, activity, and participation), evaluation, diagnosis, prognosis, anticipated goals, expected outcomes, re-examination, and criteria for discharge.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

508. Management of the Pediatric Population (2)

Prerequisites: PT 505, 507.

Physical therapy management of the pediatric patient/client with neuromusculoskeletal disorders. Includes examination, evaluation, diagnosis, prognosis and intervention (with anticipated goals) including reexamination, outcomes and criteria for discharge. Includes pathophysiology, clinical decision making, and prevention/risk factor reduction.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

509. Management of the Cardiopulmonary System (3)

Prerequisites: BIOL 341, 441; PT 505, 506.

Physical therapy management of patient/clients with cardiopulmonary disorders including: examination, evaluation, diagnosis, prognosis and intervention (with anticipated goals) including reexamination, outcomes and criteria for discharge. Includes prevention/risk factor reduction.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours) Course fee may be required.

510. Patient Management and Functional Training (2)

Prerequisites: HHS 401, 402 and admittance to MPT program.

Patient/client management with emphasis on assistive and adaptive devices and physical agents, self care and home management (including activities of daily living and instrumental activities of daily living) and wound management. May include lectures from medical and physical therapy practitioners.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

Physical Therapy Courses (P T)

511. Management of the Geriatric Population (3)

Prerequisites: PT 503, 504, 505, 507.

Physical therapy management of the geriatric patient/client including examination, evaluation, diagnosis, prognosis and intervention (with anticipated goals), including reexamination, outcomes and criteria for discharge. Includes prevention/risk factor reduction.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours) Course fee may be required.

512. Clinical Electrophysiology I (3)

Prerequisites: BIOL 341; HHS 402, 460.

The investigation of the physiological and neurological basis for the selection of electromyographic assessment tools and for the selection of electrotherapeutic intervention in the management of the patient/client with pain, deformity, muscle weakness and disorders of the peripheral nervous system.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours) Course fee may be required.

513. Clinical Electrophysiology II (2)

Prerequisites: PT 512.

The investigation of the physiological and neurological basis for the selection of electromyographic assessment tools and electrotherapeutic intervention in the management of the patient/client with disorders of the central nervous system and mixed peripheral and central nervous systems.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours) Course fee may be required.

515. Management of Individuals with Neuromuscular Disorders (2)

Prerequisite: PT 507; Corequisite: PT 523.

Evidence-based physical therapist interventions for patients/clients with disorders of the neuromuscular system including movement facilitation, education, and prevention/risk factor reduction.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

522. Clinical Practice I (1)

Prerequisite(s): PT 503, 507, 509, 510

Six weeks of supervised full-time clinical practice in the acute care or outpatient orthopedic setting. Includes examination, evaluation, intervention, advocacy, and client/family caregiver education.

Credit/No Credit grading only. May be repeated to a maximum of 2 units in different semesters. (Clinical Practice 6 weeks)

523. Clinical Practice II (1)

Prerequisite: PT 522; Corequisite: PT 515

Supervised pro bono clinical practice for management of the client with disorders of the neuromuscular system. Includes examination, evaluation, intervention, advocacy, and client/family caregiver education.

Credit/No Credit grading only. (Clinic 1 hour)

524. Clinical Practice III (1)

Prerequisites: PT 507, 515, 523; Corequisite: PT 608

Supervised advanced pro-bono clinical practice for management of the client with disorders of the neuromuscular system. Includes examination, evaluation, intervention, advocacy, and client/family caregiver education. Focus on problem solving and decision making.

Credit/No Credit grading only. (Clinic 1 hour)

525. Clinical Internship I (3)

Prerequisites: Completion of all requirements for the MPT degree.

Six weeks of supervised full-time inpatient or outpatient clinical practice in a hospital system. Satisfactory completion of the internship is required for licensure to practice in the state of California.

Credit/No Credit grading only. (Clinical internship 6 weeks) May be repeated to a maximum of 6 units in the same semester. The combination of PT 525, 526, and 527 must equal a minimum of 12 units.

526. Clinical Internship II (3)

Prerequisites: Completion of all requirements for the MPT degree.

Six weeks of supervised full-time inpatient or outpatient rehabilitation with pediatric, geriatric, or adult neurology patients. Satisfactory completion of the internship is required for licensure to practice in the state of California.

Credit/No Credit grading only. (Clinical internship 6 weeks) May be repeated to a maximum of 6 units in the same semester. The combination of PT 525, 526, and 527 must equal a minimum of 12 units.

527. Clinical Internship III (3)

Prerequisites: Completion of all requirements for the MPT degree.

Six weeks of supervised full-time patient management in an outpatient orthopedic setting. Satisfactory completion of the internship is required for licensure to practice in the state of California.

Credit/No Credit grading only. (Clinical internship 6 weeks) May be repeated to a maximum of 6 units in the same semester. The combination of PT 525, 526, and 527 must equal a minimum of 12 units.

574. Professional Practice Issues (2)

Prerequisites: HHS 374

Professional practice issues including evidence-based practice, the critical analysis of evidence, and cultural competence. Also the role of the physical therapist in facilitation of health care behavior change and educating patients and community.

Letter grade only (A-F). (Lecture/Discussion 2 hours)

590. Selected Topics in Physical Therapy (1-3)

Prerequisite: Consent of instructor.

Topics of current interest in physical therapy selected for special presentation.

Letter grade only (A-F). May be repeated to a maximum of 6 units with different topics in the same or different semesters. Topics announced in the *Schedule of Classes*.

597. Independent Studies (1-3)

Prerequisites: Consent of instructor, and for human dissection, one general introductory anatomy course, HHS 401 and 402.

Independent studies in any area of physical therapy. Human dissection is available as a special study.

Letter grade only (A-F). May be repeated to a maximum of 6 units in different semesters. (Independent studies)

604. Health Care Issues I (2)

Prerequisite: Admittance to MPT program.

Investigation of the health care delivery system including the regulatory, political, ethical, legal and promotional aspects of health care.

Letter grade only (A-F). (Lecture/discussion 2 hours)

605. Health Care Issues II (2)

Prerequisite: Admittance to MPT program.

Investigation and discussion of the process of planned direction, organization, management, and economics of physical therapy and physical therapy delivery. Includes theories of disease prevention and health promotion.

Letter grade only (A-F). (Lecture/discussion 2 hours)

607. Seminar in Cardiopulmonary Clinical Decision Making (1)

Prerequisites: PT 509.

Continuing management of patient/client with disorders of cardiopulmonary system. Integrates disorders of cardiopulmonary system with other disorders that may impact cardiopulmonary health. Includes examination, evaluation, intervention, advocacy, and caregiver education.

Letter grade only (A-F). (Seminar 1 hour)

608. Neurologic Clinical Decision Making (1)

Prerequisite: PT 507.

Continuing management of the client with disorders of the neuromuscular system. Includes examination, evaluation, intervention, advocacy, and client/family caregiver education.

Credit/No Credit grading only. (Clinic 1 hour)

611. Advances in Orthopaedic Physical Therapy (2)

Prerequisites: PT 503, 504; MPT major or physical therapist.

Exploration of advanced clinical orthopedic management strategies.

Letter grade only (A-F). (Lecture 1 hour, laboratory 3 hours)

619. Contemporary Issues in Physical Therapy (2)

Prerequisite: PT 604 and consent of instructor.

Exploration of contemporary and emerging trends in physical therapy practice.

Letter grade only (A-F). May be repeated to a maximum of 6 units with different topics in different semesters. (Lecture 1 hr, laboratory 3 hrs)

620. Management of Patients with Orthotic and Prosthetic Needs (2)

Prerequisites: PT 502, 503.

The prescription, application, and fabrication of devices and equipment (orthotic, prosthetic, supportive splinting, and taping).

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours) Course fee may be required.

622. Clinical Pathophysiology (3)

Prerequisites: PT 504, 505, 507, 509, 510, 513.

Pathophysiology of connective tissue in musculoskeletal, neuromuscular, cardiopulmonary and integumentary disorders as a basis for physical therapy evaluation, diagnosis, goal setting and conservative as well as pre and post-operative intervention in patients with multiple systemic disorders.

Letter grade only (A-F). (Lecture/discussion 3 hours)

674. Clinical Problem Solving (1)

Prerequisite: PT 574.

Critical thinking models and activities to promote problem solving and decision making in the physical therapy setting.

Letter grade only (A-F). (Lecture/discussion)

696. Research Methods (2)

Prerequisite: Admittance to MPT program.

Scientific inquiry with emphasis on information searching, research design (qualitative and quantitative), and applied statistics. Also includes critical inquiry and clinical decision-making guidelines, research ethics, and the development of a proposal on the validation of physical therapy practice.

Letter grade only (A-F). (Lecture/discussion 2 hours)

697. Directed Research Studies (1-4)

Prerequisites: PT 574, 696, advancement to candidacy and consent of instructor.

Research in an area of specialization in physical therapy under the direction of a faculty sponsor.

Letter grade only (A-F). Must be completed for a total of 4 units. Course fee may be required.

698. Research Thesis/Project (1-4)

Prerequisites: PT 574, 696, advancement to candidacy and consent of instructor.

Planning, preparation, and completion of thesis or project in physical therapy.

Letter grade only (A-F). Must be completed for a total of 4 units.

Doctor of Physical Therapy Courses (DPT)

701. Anatomy for Physical Therapy I (3)

Prerequisites: BIOL 208 and admission to DPT program.

Advanced study of the structure and function of the neuromusculoskeletal systems with emphasis on surface contour, myology, joint structure, and neurovascular supply. Regional emphasis includes upper extremity, head, neck and thorax.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours)

702. Anatomy for Physical Therapy II (3)

Prerequisite: DPT 701.

Continuation of DPT 701, with an emphasis on the normal anatomy of the lower extremities, pelvis, and abdominal region.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours)

703. Neuroanatomy (3)

Prerequisite: DPT 701. Corequisite: DPT 702.

Human neuroanatomy with emphasis on the structure and function of the central nervous system, and connecting peripheral pathways for human function and movement. Neuroanatomical and vascular lesions discussed with emphasis on differential diagnosis and neuropathology.

Letter grade only (A-F). Lecture/discussion 2 hours, laboratory 3 hours)

704. Tissue Mechanics (2)

Corequisite: DPT 701.

Advanced study of tissue (bone, muscle, dense fibrous connective tissue, cartilage, nerve) mechanics and pathomechanics including use, disuse and aging with application to joint mechanics.

Letter grade only (A-F). (Lecture/discussion 2 hours)

705. Biomechanical Principles (3)

Prerequisites: DPT 701, 702, 704.

Advanced study of joint mechanics and pathomechanics with application to therapeutic procedures, posture and movement of the limbs, temporomandibular joint, neck and trunk.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours)

706. Physiology for Therapists (6)

Prerequisite: Admission to the DPT program.

Advanced study of the mechanisms of function of the organ systems of the human body and the contribution of these systems to organismal homeostasis. Systems studied include the nervous, endocrine, musculoskeletal, sensory, cardiovascular, respiratory and renal.

Letter grade only (A-F). (Lecture/discussion 6 hours)

707. Physical Therapy Across the Life Span (2)

Prerequisites: DPT 701, 702 and 703.

Investigation and analysis of human development across the lifespan with emphasis on body systems contributing to the development of movement. Also addresses health risks, preventive strategies and wellness, including gender issues.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

Doctor of Physical Therapy Courses (DPT)

708. Motor Learning and Motor Control (2)

Theories and models of motor control and mechanisms underlying plasticity related to functional movement across the lifespan. Theories and models of normal and impaired motor learning (implicit and explicit), including application of concepts to feedback and practice in physical therapy.

Letter grade only (A-F). (Lecture/discussion 2 hours)

709. Exercise Science for Physical Therapy (3)

Prerequisites: DPT 701, 704, 706.

Study of systems challenged and altered by exercise in health and pathology. Includes exercise measurement, exercise prescription and intervention and strength and conditioning preparation.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours)

710. Pathology for Physical Therapy (3)

Advanced study of abnormal function as a result of disease. Includes general pathology and selected systems pathology, encompassing cardiovascular, pulmonary, musculoskeletal, peripheral and central nervous systems, and integumentary systems.

Letter grade only (A-F). (Lecture/discussion 3 hours)

720. Professional Interactions (3)

Self-awareness of how personality, learning preferences, and personal values affect professional interactions. Includes effective communication, conflict resolution, and eliciting patient values and goals. Also, communicating with patients who have experienced disability, sexual dysfunction, or issues with coping or dying.

Letter grade only (A-F). (Lecture/discussion 3 hours)

721. Professional Practice Issues (2)

Prerequisite: DPT 720.

Focus on professionalism and professional values including evidence-based practice, the critical analysis of evidence, and cultural competence. Also the role of the physical therapist in facilitation of health care behavior change and educating patients and the community.

Letter grade only (A-F). (Lecture/discussion 2 hours)

722. Critical Thinking for Physical Therapy (1)

Prerequisites: DPT 720, 721.

Critical thinking models and activities to promote problem solving and decision making in the physical therapy setting.

Letter grade only (A-F). (Lecture/discussion 2 hours)

731. Physical Therapy Principles of Acute Care (2)

Prerequisites: DPT 701, 702, 703.

Patient management in the acute care setting with emphasis on interpretation of laboratory values and physiological monitoring as the basis for functional training and use of assistive devices. Includes physical agents and introduction to wheelchair seating and positioning.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

732. Examination of Individuals with Musculoskeletal Disorders (3)

Prerequisite: DPT 705.

Physical therapist examination and evaluation for individuals with musculoskeletal disorders. Includes examination (history, screening, tests and measures), evaluation, diagnosis, prognosis, anticipated goals, expected outcomes, re-examination, and criteria for discharge.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours)

733. Interventions for Individuals with Musculoskeletal Disorders (4)

Prerequisites: DPT 705, 732.

Plan of care for the individual with musculoskeletal system disorders that is safe, effective and patient centered. Includes monitoring and adjusting plan of care, patient education, documentation, and use of supportive personnel.

Letter grade only (A-F). (Lecture/discussion 3 hours, laboratory 3 hours)

734. Advanced Management of Individuals with Musculoskeletal Disorders (2)

Prerequisites: DPT 705, 732, 733.

Physical therapist management of individuals with musculoskeletal disorders. Includes examination, evaluation, diagnosis, prognosis, expected outcomes, re-examination, and criteria for discharge. Includes safe, patient-centered plan of care, patient education, documentation, and use of supportive personnel.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

735. Normal and Pathological Gait (2)

Prerequisite: DPT 705.

Kinematics and kinetics of normal and pathological gait with emphasis on critical analysis of gait deviations and their causes in preparation for intervention.

Letter grade only (A-F). (Lecture 1 hour, laboratory 3 hours)

736. Management of Individuals with Orthotic and Prosthetic needs (2)

Prerequisites: DPT 732, 735.

The prescription, application, and fabrication of devices and equipment (orthotic, prosthetic, supportive splinting, and taping).

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

740. Evaluation of Individuals with Neuromuscular Disorders (2)

Prerequisite: HHS 460.

Physical therapist examination and evaluation for individuals with neuromuscular disorders. Includes examination (task and movement analysis, tests and measures for body structure and function, activity, and participation) evaluation, diagnosis, prognosis, anticipated goals, expected outcomes, re-examination, and criteria for discharge.

Letter grade only (A-F). (Lecture 1 hour, laboratory 3 hours)

741. Intervention for the Individual with Neuromuscular Disorders I (2)

Prerequisites: DPT 740; Corequisite: DPT 782.

Intervention for the individual with disorders of the central neuromuscular system. Planning and implementation of plan of care that is safe, effective and patient centered; monitoring and adjusting plan of care; patient education; documentation; use of supportive personnel.

Letter grade only (A-F). (Lecture 1 hour, laboratory 3 hours)

742. Intervention for the Individual with Neuromuscular Disorders II (1)

Prerequisites: DPT 740, DPT 741. Corequisite: DPT 783.

Intervention for the individual with disorders of the spinal cord and peripheral nerves. Planning and implementation of plan of care that is safe, effective and patient centered; monitoring and adjusting plan of care; patient education; documentation; use of supportive personnel.

Letter grade only (A-F). (Laboratory 3 hours)

743. Electroneuromyographic Management I (2)

Prerequisites: DPT 702, 703.

Physiologic and neurological basis for the selection of

electroneuromyographic [ENMG] assessment and intervention in the management of neuromusculoskeletal and peripheral nerve disorders.

Letter grade only (A-F). (Lecture/laboratory 1 hour, laboratory 3 hours)

744. Electroneuromyographic Management II (2)

Prerequisite: DPT 743.

Physiologic and neurological basis for the selection of electroneuromyographic [ENMG] assessment and intervention in the management of central nervous system and mixed central and peripheral nervous system disorders.

Letter grade only (A-F). (Lecture/laboratory 1 hour, laboratory 3 hours)

745. Management of the Pediatric Population (2)

Prerequisites: DPT 707, 740.

Physical therapist management of the pediatric individual with neuromusculoskeletal disorders. Includes examination, evaluation, diagnosis, prognosis, expected outcomes, re-examination, and criteria for discharge. Includes safe, patient-centered plan of care, patient education, documentation, and use of supportive personnel.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

746. Advanced Management of Individuals with Neuromuscular Disorders (1)

Prerequisites: DPT 740, 741, 742.

Physical therapist advanced management of individuals with complex neurologic disorders. Integrates and advances knowledge and skills related to evaluation and intervention. Includes community re-integration, home assessment, and management of the complex patient.

Letter grade only (A-F). (Lecture/Discussion 1 hour)

750. Imaging for Physical Therapists (2)

Prerequisites: PT 710, 732.

Knowledge and skills of radiology and imaging necessary for a comprehensive evaluation to design a rehabilitation program. Includes roentgenograms, dynamic and static MRI, CT, scintigraphy, PET, ultrasound, bone densitometry, and radioisotopes.

Letter grade only (A-F). (Lecture/discussion 2 hours)

751. Pharmacology for Physical Therapists (2)

Prerequisite: Admission to DPT program.

Study of the method of action, indications, contraindications and side effects of drugs commonly used by patients seen in physical therapy. Includes knowledge and skills necessary to perform a comprehensive evaluation necessary to design a rehabilitation program.

Letter grade only (A-F). (Lecture/Discussion 2 hours)

752. Differential Diagnosis for Physical Therapists (2)

Prerequisites: DPT 743, 750, 751.

Anatomical and physiological basis for patient screening to determine if referral to a medical doctor is required in the event that a medical condition supersedes or mimics a condition requiring physical therapy intervention.

Letter grade only (A-F). (Lecture/discussion 2 hours)

760. Management of Individuals with Cardiopulmonary Disorders (3)

Prerequisites: DPT 706, 709.

Physical therapist management of individuals with cardiovascular and pulmonary disorders. Includes examination, evaluation, diagnosis, prognosis, expected outcomes, and criteria for re-examination and discharge. Includes safe, patient-centered plan of care, patient education, documentation and use of supportive personnel.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours)

765. Management of Individuals with Integumentary Disorders (2)

Prerequisite: DPT 710.

Physical Therapy management of individuals with integumentary (skin) disorders including examination, evaluation, diagnosis, prognosis, intervention, re-examination and criteria for discharge.

Letter grade only (A-F). (Lecture/discussion 1 hour, laboratory 3 hours)

766. Prevention and Wellness (2)

Prerequisites: DPT 733, 745, 760.

Examination of the role of physical therapy in health promotion, wellness, and prevention of disease and disability across the lifespan.

Letter grade only (A-F). (Lecture/discussion 2 hours)

767. Management of the Geriatric Population (3)

Prerequisites: DPT 733, 734, 745, 760.

Physical therapy management of the geriatric patient/client including examination, evaluation, diagnosis, prognosis and intervention with anticipated goals, expected outcomes, criteria for discharge and reexamination.

Letter grade only (A-F). (Lecture/discussion 2 hours, laboratory 3 hours)

768. Clinical Pathophysiology (3)

Prerequisites: DPT 707, 710, 731,750, 751, 752.

Pathophysiology of connective tissue in musculoskeletal, neuromuscular, cardiopulmonary and integumentary disorders as a basis for physical therapy evaluation, diagnosis, goal setting and conservative as well as pre and post-operative intervention in patients with multiple systemic disorders.

Letter grade only (A-F). (Lecture/discussion 3 hours)

769. Advanced Management of Individuals with Cardiopulmonary Disorders (1)

Prerequisite: DPT 760.

Advanced management of individuals with cardiovascular and pulmonary disorders. Includes integration of cardiovascular and pulmonary disorders with other disorders commonly treated by physical therapists.

Letter grade only (A-F). (Lecture/discussion 1 hour)

770. Health Care Delivery I (2)

Prerequisites: DPT 721, 722.

Investigation of the health care delivery system including the legal, regulatory, political, ethical and professional duties of Physical Therapists. Includes laws and regulations governing compliant human management and environmental safety.

Letter grade only (A-F). (Lecture/discussion 2 hours)

771. Health Care Delivery II (2)

Prerequisite: DPT 770.

Investigation of the process of planned direction, organizational theory and management, and economics and fiscal management of physical therapy delivery including marketing and promotion.

Letter grade only (A-F). (Lecture/discussion 2 hours)

781. Clinical Practice I (3)

Prerequisites: DPT 731, 732, 735, 740.

Six weeks of supervised full-time clinical practice in the acute care or outpatient physical therapy setting. Includes examination, evaluation, intervention, advocacy, and client/family caregiver education.

Credit/No Credit grading only. May be repeated to a maximum of 6 units in different semesters. (Clinical Practice 6 weeks)

Doctor of Physical Therapy Courses (DPT)

782. Neuromusculoskeletal Practice I (1)

Prerequisite: DPT 740. Corequisite: DPT 741.

Supervised pro bono clinical practice for management of the client with disorders of the neuromusculoskeletal systems. Includes examination, evaluation, intervention, advocacy, and client/family caregiver education.

Credit/No Credit grading only. (Clinic 1 hour)

783. Neuromusculoskeletal Practice II (1)

Prerequisite: DPT 782. Corequisites: DPT 742, 744.

Supervised advanced pro bono clinical practice for management of the client with disorders of the neuromuscular system. Includes examination, evaluation, intervention, advocacy, and client/family caregiver education. Focus on problem solving and decision making.

Credit/No Credit grading only. (Clinic 1 hour)

784. Clinical Practice II (3)

Prerequisites: DPT 733, 734, 741, 742, 760, 781.

Six weeks of supervised full-time clinical practice in the acute care or outpatient physical therapy setting. Includes examination, evaluation, intervention, advocacy, and client/family caregiver education.

Credit/No Credit Grading only. May be repeated to a maximum of 6 units in different semesters. (Clinical Practice 6 weeks)

785. Clinical Internship I (3)

Prerequisites: DPT 752, 781, 784.

Six weeks of supervised full-time clinical practice in an inpatient or outpatient physical therapy setting. Includes examination, evaluation, intervention, advocacy, and client/family caregiver education.

Credit/No Credit Grading only. May be repeated to a maximum of 6 units in different semesters. (Clinical Practice 6 weeks)

786. Clinical Internship II (3)

Prerequisites: DPT 781, 784, 785.

Six weeks of supervised full-time clinical practice in an inpatient or outpatient physical therapy setting. Includes examination, evaluation, intervention, advocacy, and client/family caregiver education. Setting will be different from DPT 785 internship.

Credit/No Credit Grading only. May be repeated to a maximum of 6 units in different semesters. (Clinical Practice 6 weeks)

790. Selected Topics in Physical Therapy (1-3)

Prerequisite: Admission to DPT program or consent of instructor.

Topics of current interest in physical therapy selected for special presentation.

Letter grade only (A-F). May be repeated to a maximum of 6 units with different topics in different semesters. Topics announced in the *Schedule of Classes*.

791. Current Trends in Physical Therapy (2)

Prerequisite: Admission to DPT program or consent of instructor.

Current trends in physical therapy selected for special presentation.

Letter grade only (A-F). May be repeated to a maximum of 6 units with different topics in different semesters. Practice trend announced in the *Schedule of Classes*.

796. Research Methods (2)

Prerequisite: Admission to DPT program.

Scientific inquiry with emphasis on information searching. Includes epidemiology, research design, measurement theory, applied statistics, critical inquiry and clinical decision-making guidelines, research ethics, and the examination of research intended to validate physical therapy practice.

Letter grade only (A-F). (Lecture/discussion 2 hours)

797. Doctoral Project (1-4)

Prerequisite: DPT 796.

Research in an area of specialization in physical therapy under the direction of a faculty sponsor.

Letter grade only (A-F). A total of 4 units must be completed.

May be repeated to a maximum of 4 units in different semesters.