

PHYSICAL THERAPY

College of Health and Human Services

Program Description

The primary mission of the California State University, Sacramento Doctor of Physical Therapy program is to graduate knowledgeable, effective, adaptable, and reflective physical therapist generalist practitioners and health care leaders. Graduates demonstrate ethical, responsible, professional behavior, are sensitive to cultural and psychosocial differences, use evidence derived from the scientific and professional literature to inform independent judgments to meet patient needs and to advance the profession. They utilize critical and integrative thinking and problem-solving, practice lifelong learning, and provide services that contribute to the optimal health and function of community residents.

Physical Therapy at Sacramento State is one of several professional curricula in the College of Health and Human Services. The program complements others in the College and provides opportunities for scholarship, instructional collaboration, and interaction.

The doctoral curriculum of 3 years, including summers, encompasses didactic instruction, laboratory experience, and clinical education. The clinical component is thirty-six weeks of full-time, off-campus clinical internships.

Special Features

- Following successful completion of both the clinical and regular academic program, students are awarded a Doctor of Physical Therapy and will be eligible to take the National Physical Therapy Licensure Examination.
- The Doctor of Physical Therapy degree program at Sacramento State is fully accredited by the Commission on Accreditation in Physical Therapy Education/APTA. The Commission can be contacted for questions at:
1111 North Fairfax Street
Alexandria, VA 22314-1488
(703) 684-2782.

Notes:

- Admission is for fall semester only.
- Classes are offered primarily during daytime hours, and full-time study is required.

Career Possibilities

Hospitals · Ambulatory Care Centers · Private Practice · Sports Medicine Centers · Rehabilitation Centers · Industries · Extended Care Facilities · Home Health Care · Schools · University Teaching and Research · Consulting

Contact Information

D. Michael McKeough, PT, Ed.D., Director
Heather Crummett, Administrative Coordinator
Folsom Hall 1054
(916) 278-6426
www.hhs.csus.edu/PT (<http://www.hhs.csus.edu/PT>)

Faculty

BARAKATT, EDWARD T.

COLEMAN-SALGADO, BRYAN

ESCAMILLA, RAFAEL

LEWIS, H. CLARE

McGINTY, SUSAN

McKEOUGH, D. MICHAEL

STOCKERT, BRAD

Admission Requirements

To be eligible for admission consideration, students must meet the following criteria:

- Attain a baccalaureate degree from an accredited college or university prior to enrollment in the program;
- Eligible for admissions as a graduate student in good standing;
- Complete nine of the eleven prerequisite courses by the application deadline. The two remaining courses must be completed in the Spring and/or Summer semester (a maximum of one of these course may be completed during the summer);
- Complete a minimum 100 total hours of work/volunteer experience in an inpatient and an outpatient setting;
- Three letters of recommendation, one from a college professor and two from licensed physical therapists;
- GRE taken within five years of application.

Admission Procedures

Submit the following applications:

1. Physical Therapist Centralized Application Service (PTCAS) online application by the listed deadline;
2. CSU, Sacramento's Department of Physical Therapy, DPT Supplemental Application, by the listed deadline.

Both applications are accessible via the department website. Following the initial screening, the top 100 applicants will be invited to interview and to submit a CSU Mentor application.

Applicants will submit the following requirements with their PTCAS application:

- Official transcripts from all colleges and universities that you have attended.
- Verification of completing a minimum 100 total hours of work/volunteer experience in at least one "Inpatient" and one "Outpatient" setting. Each setting must have at least twenty-five (25) hours of exposure. All PT experience hours must be completed and verified by the deadline.
- Three letters of recommendation, two from U.S. licensed physical therapists and one from a college professor.
- Graduate Record Examination (GRE) scores taken within five years of applying to the DPT program using code: 7588.
- Applicants who do not possess a baccalaureate degree from a post secondary institution where English is a principal language must take the TEST of English as a Foreign Language (TOEFL). Submit TOEFL scores with your PTCAS application.

- Applicants who previously attended another professional entry-level physical therapy program must submit a letter from the director of the previous physical therapy program designating their academic standing (*if applicable*).

Admission is granted on a competitive basis. Meeting the admission requirements does not guarantee acceptance into the DPT program.

Selection Procedures

Application materials are reviewed by the DPT Admissions Committee. During the first screening applications are reviewed for the prerequisite coursework GPA, recommendation forms from two licensed physical therapists and one academic professional, GRE scores, volunteer hours, and additional background criteria. Based on the results of this first screening, the top applicants will be invited for a panel interview. The top thirty-two applicants along with alternates will be notified of their status within two weeks of the final interviews.

Additional Information

Health Requirements

Students admitted to the graduate program in the Department of Physical Therapy are required to have specified immunizations by the Student Health Center or a private physician prior to any clinical participation. Complete information on health requirements will be provided to incoming students.

Costs and Fees

In addition to University tuition and fees, students can be expected to incur costs of approximately \$1,800 per year for books, and supplies.

Students are required to assume responsibility for transportation and housing costs for clinical internships which may be anywhere in a contracted site in California.

Health Insurance, Transportation Schedules, CPR Certification, and Background Screens

All students accepted into the graduate program in the Department of Physical Therapy must provide their own health insurance and transportation to clinical facilities. Major medical health insurance is mandatory prior to beginning clinical experiences. CPR certification (Basic Adult and Pediatric for healthcare providers) must be maintained according to the requirements of the American Heart Association or American Red Cross. Students will be required to complete a criminal background check prior to clinical placements. A positive criminal history may limit or preclude student participation in the clinical courses.

Advancement to Candidacy

Each student must file an application for Advancement to Candidacy indicating a proposed program of graduate study. This procedure may begin as soon as the classified graduate student has:

- removed any deficiencies in admission requirements and achieved classified status;
- successfully completed all courses with a grade of "B" or higher in the first 4 terms with a minimum of 3.0 ("B") overall grade point average in all DPT graduate level coursework;
- passed (with a grade of "B" or higher) a Graduate Writing Intensive (GWI) course (PT 608) and
- passed the faculty candidacy assessment.

Doctor of Physical Therapy Degree Required Prerequisite Courses (41-42 units)

Prerequisite coursework must have been completed at an accredited college or university with a minimum grade of "C" or better.

Prerequisite Courses Required for enrollment consideration (41-42 Units)

<i>Human Anatomy with Lab</i> ¹		
Select one of the following:		4
BIO 22	Introductory Human Anatomy	
or BIO 122	Advanced Human Anatomy	
BIO 25 & BIO 26	Human Anatomy and Physiology I Human Anatomy and Physiology II	
<i>Human Physiology with Lab</i> ¹		
Select one of the following:		4
BIO 25 & BIO 26	Human Anatomy and Physiology I Human Anatomy and Physiology II	
BIO 131	Systemic Physiology	
<i>Psychology</i>		
PSYC 2	Introductory Psychology	3
Select one additional Psychology course similar to:		3
PSYC 148	Child Psychology	
PSYC 150	Psychological Aspects of Aging	
PSYC 151	Psychological Aspects of Death and Dying	
PSYC 168	Abnormal Psychology	
<i>Statistics</i>		
STAT 1	Introduction to Statistics	3 - 4
or STAT 50	Introduction to Probability and Statistics	
<i>Chemistry I with Lab</i>		
CHEM 1A	General Chemistry I	5
or CHEM 6A	Introduction to General Chemistry	
<i>Chemistry II with Lab</i>		
CHEM 1B	General Chemistry II	5
or CHEM 6B	Introduction to Organic and Biological Chemistry	
<i>Physics I with Lab</i>		
PHYS 5A	General Physics: Mechanics, Heat, Sound	4
<i>Physics II with Lab</i>		
PHYS 5B	General Physics: Light, Electricity and Magnetism, Modern Physics	4
<i>Kinesiology (with lab preferred)</i> ¹		
KINS 151	Kinesiology	3
or KINS 151A	Biomechanics	
or KINS 151D	Applied Kinesiology and Biomechanics	
<i>Physiology of Exercise (with lab preferred)</i> ¹		
KINS 150	Exercise and Sport Physiology	3
or KINS 152	Physiology Of Exercise	
Total Units		41-42

¹ Anatomy, Physiology, Kinesiology/Biomechanics, and Exercise Physiology must have been completed within the last ten (10) years of the application deadline for the DPT program.

Professional Courses for the Doctor of Physical Therapy Degree (105-114 units)

Students must earn a grade of "B" in all courses taken in the Doctor of Physical Therapy Program.

A minimum of 2 elective units are required.

First Fall Semester (16 Units)

BIO 633	Human Gross Anatomy for Physical Therapists	3
PT 600	Pathokinesiology	5
PT 602	Evidence Informed Practice I	3
PT 608	PT/Patient/Professional Interactions	2
PT 630	Pathophysiology	3

First Spring Semester (16 Units)

PT 604	Principles of Human Movement	2
PT 606	Therapeutic Measurements and Techniques	4
PT 614	Neuroscience for Physical Therapy	3
PT 618	Foundations for Patient Management	1
PT 620	Physical Therapy Interventions I	3
PT 622	Evidence Informed Practice II	3

First Summer Semester (8 Units)

PT 632	Pharmacology for Physical Therapists	2
PT 634	Diagnostic Imaging for Physical Therapy	2
PT 636	Geriatrics/Gerontology for Physical Therapists	2
PT 638	Health, Wellness and Ergonomics in Physical Therapy	2

Second Fall Semester (17 Units)

PT 624	Adult Neuromuscular Patient Management I	4
PT 625	Musculoskeletal Patient Management I	4
PT 626	Clinical Agents	3
PT 640	Physical Therapy Interventions II	3
PT 646	Acute Care and Cardiopulmonary Physical Therapy	2
PT 660A	Graduate Physical Therapy Seminar 1A: Research ¹	1

Second Spring Semester (21 Units)

PT 627	Physical Therapy Educator	1
PT 644	Adult Neuromuscular Patient Management II	4
PT 645	Musculoskeletal Patient Management II	4
PT 648	Health Care Delivery in Physical Therapy I	2
PT 660B	Graduate Physical Therapy Seminar IB: Research ¹	1
PT 660D	Graduate Physical Therapy Seminar ID: Electrotherapeutics ¹	2
PT 660G	Certified Strength and Conditioning Specialist (CSCS) ¹	2
PT 662	Differential Diagnosis in Physical Therapy	3
PT 669	Psychosocial Issues in Physical Therapy	1
PT 689	Doctoral Project Proposal	1

Second Summer Semester (6 Units)

PT 695A	Clinical Internship I	6
---------	-----------------------	---

Third Fall Semester (17 Units)

PT 660C	Graduate Physical Therapy Seminar IC: Research ¹	1
PT 660E	Graduate Physical Therapy Seminar IE: NeuroPediatric Laboratory ¹	2
PT 660F	Graduate Physical Therapy Seminar IF: Adult Neuromuscular Laboratory ¹	2

PT 663	Integumentary Patient Management	2
PT 664	Neuropediatric Patient Management	2
PT 665	Musculoskeletal Patient Management III	3
PT 668	Health Care Delivery in Physical Therapy II	2
PT 690	Doctoral Project/Culminating Experience	3

Third Spring Semester (6 Units)

PT 695B	Clinical Internship II	6
---------	------------------------	---

Third Summer Semester (7 Units)

PT 680	Graduate Physical Therapy Seminar II	1
PT 695C	Clinical Internship III	6

Total Units		114
-------------	--	-----

¹ Elective Course. A minimum of 2 elective units is required.

PT 130. Pathophysiology. 2 Units

Prerequisite(s): BIO 22 or equivalent, BIO 131 or equivalent.

Designed to promote the understanding and application of fundamental disease processes in clinical settings. General concepts of disease, including etiology, pathogenesis, morphology, and clinical significance are discussed. General pathophysiology concepts include: cell injury, necrosis, inflammation, wound healing, and neoplasia. These concepts are applied in a systems-oriented approach to disease processes affecting musculoskeletal, cardiopulmonary, renal, nervous, gastrointestinal, immune, hematological, and endocrine systems. Lecture two hours.

PT 260A. Graduate PT Seminar IA. 1 Unit

Prerequisite(s): PT 200, PT 202, PT 204, PT 206, PT 208, PT 220, PT 222, PT 224, PT 225, PT 226, PT 300 and if taken in the spring: PT 227, PT 240, PT 244, PT 245, PT 246, PT 248.

Advanced study and mentoring in foundational and clinical sciences in physical therapy. Students may be chosen to mentor in select courses identified by faculty to be arranged prior to the first class session.

Note: Open to Physical Therapy Majors only.

PT 260B. Graduate Pt Seminar IB. 1 Unit

Prerequisite(s): PT 200, PT 202, PT 204, PT 206, PT 208, PT 220, PT 222, PT 224, PT 225, PT 226, PT 227, PT 240, PT 244, PT 245, PT 246, PT 248, PT 300.

Advanced study in foundational and clinical sciences in physical therapy. Students may choose from a selection of current topics to be arranged prior to the first class session.

Note: Open to Physical Therapy majors only.

PT 280. Graduate PT Seminar II. 1 Unit

Presented after the final clinical field experience, will review students' experiences in the clinic and promote reflection on the professional practice of physical therapy. Serves as a review of a variety of physical therapy subjects in preparation for the licensure examination. Students will use computer interactive software to assist with preparation for this standardized national test format.

Note: Open to Physical Therapy majors only.

PT 295. Physical Therapy Clinical Experience. 1 - 3 Units

Supervised clinical affiliation equivalent to two full-time weeks up to six full-time weeks in a physical therapy setting under the direct supervision of a licensed Physical Therapist.

Note: Placement is arranged through the Program. Permission of Clinical Coordinator required.

Credit/No Credit

- PT 299. Special Problems.** **1 - 3 Units**
Individual projects or directed reading designed for students capable of independent study.
Note: Admission requires written approval of instructor and program director.
Credit/No Credit
- PT 400A. Clinical Practicum II.** **4 Units**
This component of the PT 400 clinical certificate series totals 8 weeks of progressively responsible full-time clinical education in an inpatient, outpatient, long term care, home health care, or pediatric setting under direct supervision of a licensed PT. Students improve, refine and master evaluation and treatment abilities developed during Physical Therapy master's curriculum.
Note: Open to Physical Therapy majors only who have successfully completed two years of the master's curriculum and the Clinical Practicum I experience.
Credit/No Credit
- PT 400B. Clinical Practicum III.** **4 Units**
This component of the PT 400 clinical certificate series totals 8 weeks of progressively responsible full-time clinical education in an inpatient, outpatient, long term care, home health care, or pediatric setting under direct supervision of a licensed PT. Students improve, refine and master evaluation and treatment abilities developed during the Physical Therapy master's curriculum.
Note: Open to Physical Therapy majors only who have successfully completed two years of the master's curriculum, Clinical Practicum I and II experience.
Credit/No Credit
- PT 400C. Clinical Practicum IV.** **4 Units**
This third component of the PT 400 clinical certificate series totals 8 weeks of progressively responsible full-time clinical education in an inpatient, outpatient, long term care, home health care, or pediatric setting under direct supervision of a licensed PT. Students improve, refine and master evaluation and treatment abilities developed during the Physical Therapy master's curriculum.
Note: Open to Physical Therapy majors only who have successfully completed two years of the master's curriculum and Clinical Practicum I, II, and III.
Credit/No Credit
- PT 600. Pathokinesiology.** **5 Units**
Prerequisite(s): Open to Physical Therapy majors only.
Corequisite(s): BIO 633, PT 602, PT 608, PT 630.
This course will address functional anatomy, surface anatomy with palpation, arthrology, biomechanics, pathologies related to the musculoskeletal and nervous systems. Both normal motion and pathological motion will be addressed. Students will gain competence in surface anatomy and palpation skills.
- PT 602. Evidence Informed Practice I.** **3 Units**
Prerequisite(s): Open to Physical Therapy majors only.
Corequisite(s): BIO 633, PT 600, PT 608, PT 630.
This course is designed to teach students to critically read and interpret the physical therapy scientific literature. Topics will include research design and statistical testing procedures commonly used in physical therapy. Students will review and critique current physical therapy articles utilizing the research designs and statistical testing procedures being studied.
- PT 604. Principles of Human Movement.** **2 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 608, PT 630.
Corequisite(s): PT 606, PT 614, PT 618, PT 620, PT 622.
This course focuses on developing an understanding of components of human movement under normal and pathological conditions. Content includes the American Physical Therapy Association Model of Practice, models of disablement, contemporary concepts of motor learning and motor control, task analysis, and theories of the recovery of function. The course includes a review of the foundations of neuroanatomy for normal movement.
Note: Open to Physical Therapy majors only.
- PT 606. Therapeutic Measurements and Techniques.** **4 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 608, PT 630.
Corequisite(s): PT 604, PT 614, PT 618, PT 620, PT 622.
In this course students acquire general physical therapy examination, evaluation and patient handling skills. Students will practice and demonstrate techniques under faculty supervision in the following areas: Measurement of vital signs, manual strength testing, testing of joint range of motion and muscle length, patient positioning, transfer techniques, gait training, use of wheelchairs, and use of assistive devices.
Note: Open to Physical Therapy majors only.
- PT 608. PT/Patient/Professional Interactions.** **2 Units**
Corequisite(s): BIO 633, PT 600, PT 602, PT 630.
The course prepares physical therapy students to learn about themselves, others, and the environment in which they will interact with others as professionals. It addresses professionalism, self-awareness, communication, cultural competence, ethics, documentation, and end-of-life care. This course assists students with transitioning into their professional roles.
Note: Graduate Writing Intensive (GWI) course; open to Physical Therapy majors only.
- PT 614. Neuroscience for Physical Therapy.** **3 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 608, PT 630.
Corequisite(s): PT 604, PT 606, PT 618, PT 620, PT 622.
This course is designed to prepare clinicians to better understand the neurological control of human behavior. A systems approach is used to examine the major anatomical and physiological principles and mechanisms by which the nervous system controls behavior under normal and pathological conditions. Because the course is being taught to health care professionals, clinical correlates of each system will also be presented. One class session is dedicated to presentation of human gross anatomical specimens.
- PT 618. Foundations for Patient Management.** **1 Unit**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 608, PT 630.
Corequisite(s): PT 604, PT 606, PT 614, PT 618, PT 620, PT 622.
This course introduces the disablement model that forms the conceptual framework for understanding and organizing the practice of physical therapy. The model delineates the possible consequences of disease and injury for the person and society. The course goes on to identify how the model informs the five elements of patient management: Examination, Evaluation, Diagnosis, Prognosis (including Plan of Care), and Intervention. The course will further expand on professionalism introduced in PT 608.
Note: Open to Physical Therapy majors only.

- PT 620. Physical Therapy Interventions I. 3 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 608, PT 630.
Corequisite(s): PT 604, PT 606, PT 614, PT 618, PT 622.
 In this course students learn, practice and demonstrate the clinical application of basic exercise regimes for the prevention of limitations, improvement of functional abilities and the treatment of disorders associated with the neuromuscular, skeletal and cardiopulmonary systems. In addition, the application of motor control principles to exercise and aquatic therapy are addressed.
Note: Open to Physical Therapy majors only.
- PT 622. Evidence Informed Practice II. 3 Units**
Corequisite(s): PT 604, PT 606, PT 614, PT 618, PT 620.
 Designed to build upon the data analysis and research design topics covered in PT 602. Emphasis will be placed on evidence based methodologies currently used in the physical therapy literature evaluating the effectiveness of interventions, the validity of outcome measures, the validity of diagnostic measures, and the identification of prognostic measures.
Note: Open to Physical Therapy majors only. Prerequisite
- PT 624. Adult Neuromuscular Patient Management I. 4 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 630, PT 632, PT 634, PT 636, PT 638.
Corequisite(s): PT 625, PT 626, PT 640, PT 646.
 This course is first in a three course sequence focused on acquisition and integration of knowledge and skills needed to manage patients with movement dysfunction caused by neurological damage (Referred to in the Guide as Neuromuscular Practice Patterns). Focus is on development and implementation of plans of care based on sound evaluative, treatment and problem-solving skills.
Note: Open to Physical Therapy majors only.
- PT 625. Musculoskeletal Patient Management I. 4 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 630, PT 632, PT 634, PT 636, PT 638.
Corequisite(s): PT 624, PT 626, PT 640, PT 646.
 This course, the first of three, focuses on acquisition, integration, knowledge and skills involved in developing and implementing a patient management plan for the patient with musculoskeletal dysfunction based on sound evaluative findings. Lectures address etiology, signs and symptoms, medical, surgical, and physical therapy management of musculoskeletal dysfunction. Labs address skill development for performing evaluation and interventions safely and effectively. The course addresses the management of lower extremity dysfunction.
Note: Open to Physical Therapy majors only.
- PT 626. Clinical Agents. 3 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 630, PT 632, PT 634, PT 636, PT 638.
Corequisite(s): PT 624, PT 625, PT 640, PT 646.
 This course presents theory, demonstration and laboratory practice in physical therapy modalities and techniques including thermal agents, hydrotherapy, ultrasound (US), ultraviolet, diathermy and massage. Theory, demonstration and practice using electrical modalities are included. Case studies will be utilized for decision making in the proper application of modalities based on current research evidence, knowledge of indications, contradictions and physiologic effects.
Note: Open to Physical Therapy majors only.
- PT 627. Physical Therapy Educator. 1 Unit**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, PT 646.
Corequisite(s): PT 644, PT 645, PT 648, PT 662, PT 669.
 This course presents the role of the physical therapist as health educator. The course introduces teaching and learning theory, learning domains, the identification of learning styles, and teaching strategies to address different learner needs across the life-span. Students will practice instructional formats and prepare and analyze patient education materials. Students will practice applications of appropriate technology for the design of professional presentations. Self-assessment, reflection and peer-assessment are required course components.
Note: Open to Physical Therapy majors only.
- PT 630. Pathophysiology. 3 Units**
Prerequisite(s): Admission to the Doctor of Physical Therapy Program.
Corequisite(s): BIO 633, PT 600, PT 602, PT 608.
 This course is designed to promote the understanding and application of fundamental disease processes in clinical settings. General concepts of disease, including etiology, pathogenesis, morphology, and clinical significance are discussed within the context of cases. General pathophysiology concepts include: cell injury, necrosis, inflammation, wound healing and neoplasia. These concepts are applied in a systems-orientated approach to disease processes affecting musculoskeletal, cardiopulmonary, renal, nervous, gastrointestinal, immune, hematological and endocrine systems.
- PT 632. Pharmacology for Physical Therapists. 2 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 630.
Corequisite(s): PT 634, PT 636, PT 638.
 This course provides a study of pharmacological agents and their effects on the musculoskeletal, neuromuscular, cardiopulmonary and integumentary systems. Particular emphasis is placed on recognition of adverse reactions and side effects of various drugs as they affect patients receiving physical therapy.
Note: Open to Physical Therapy Majors only.
- PT 634. Diagnostic Imaging for Physical Therapy. 2 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 630.
Corequisite(s): PT 632, PT 636, PT 638.
 This course provides an overview of imaging techniques commonly used in radiology and their implications to the role of physical therapists in professional practice. The role of imaging techniques in the diagnostic and intervention-planning processes for physical therapists is presented.
Note: Open to Physical Therapy Majors only.
- PT 636. Geriatrics/Gerontology for Physical Therapists. 2 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 630.
Corequisite(s): PT 632, PT 634, PT 638.
 This course explores normal and pathological aging and the implications of both on Physical therapist practice. It will explore the ramifications of aging components of patient management interventions including major practice patterns: musculoskeletal, neuromuscular, cardiopulmonary, and integumentary. It will also explore how aging may impact patient teaching.
Note: Open to Physical Therapy majors only.

PT 638. Health, Wellness and Ergonomics in Physical Therapy. 2 Units
Prerequisite(s): BIO 633, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 630.

Corequisite(s): PT 632, PT 634, PT 636.

This course presents basic philosophical, historical, psychological and scientific foundations in wellness; reviews cultural forces/theories that affect individuals and society; applies concepts of healthy lifestyle education to reach an understanding of the importance of wellness and to establish an effective and potentially fulfilling lifestyle. Ergonomic concepts as they apply to patient and self (to maintain and prevent future injuries, especially repetitive) will be covered as one preventative strategy.

Note: Open to Physical Therapy majors only.

PT 640. Physical Therapy Interventions II. 3 Units

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 630, PT 632, PT 634, PT 636 and PT 638.

Corequisite(s): PT 624, PT 625, PT 626, PT 640, PT 646, PT 660A.

This course is a continuation of Physical Therapy Interventions I. This course focuses on the presentation of selected topics in acute care and cardiopulmonary Physical Therapy. Students will learn how to perform appropriate and comprehensive examinations, interpret the examination findings as well as design and implement a plan of care based upon the next available evidence.

Note: Open to Physical Therapy majors only.

PT 644. Adult Neuromuscular Patient Management II. 4 Units

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640 and PT 646.

Corequisite(s): PT 627, PT 645, PT 648, PT 662, PT 669.

This course is the second in a three course sequence focused on acquisition and integration of knowledge and skills needed to manage patients with movement dysfunctions caused by neurological damage (Referred to in the Guide as Neuromuscular Practice Patterns). Focus is on development and implementation of plans of care based on sound evaluative findings and evidence of efficacy. Case presentation, video demonstrations, and patient contact is used to develop evaluation, treatment and problem solving skills.

Note: Open to Physical Therapy majors only.

PT 645. Musculoskeletal Patient Management II. 4 Units

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640 and PT 646.

Corequisite(s): PT 627, PT 644, PT 645, PT 648, PT 662, PT 669.

This course, the second of three, focuses on acquisition and integration of knowledge and skills involved in developing and implementing management plans for patients with musculoskeletal dysfunction from sound evaluative findings. Lectures address etiology, signs and symptoms, medical, surgical, and physical therapy management of musculoskeletal dysfunction. Labs address safe and effective evaluation and interventions, specifically joint mobilizations. Joint mobilizations will cover one technique per joint restriction. This course addresses upper extremity and spine dysfunction.

Note: Open to Physical Therapy majors only.

PT 646. Acute Care and Cardiopulmonary Physical Therapy. 2 Units
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 630, PT 632, PT 634, PT 636 and PT 638.

Corequisite(s): PT 624, PT 625, PT 626, PT 640.

This course focuses on the presentation of selected topics in acute care and cardiopulmonary Physical Therapy. The course includes a discussion of common pathologies in the cardiopulmonary system and those associated with an acute care setting, as well as common medical tests, laboratory tests, surgical procedures and pharmacological interventions used with this patient population.

Note: Open to Physical Therapy majors only.

PT 648. Health Care Delivery in Physical Therapy I. 2 Units

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640 and PT 646.

Corequisite(s): PT 627, PT 644, PT 645, PT 662, PT 669.

This course provides a historical overview of health care delivery and financing in the U.S., up to and including the current effects on the delivery of physical therapy care. The continuum of care concept, an overview of national economic policy and the mechanisms for financing physical therapy services will be presented. Administrative topics including human resources, financial management, planning, marketing, patient's rights, and medical records management will be covered.

Note: Open to Physical Therapy majors only.

PT 660A. Graduate Physical Therapy Seminar 1A: Research. 1 Unit

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 630, PT 632, PT 634, PT 636 and PT 638

Corequisite(s): PT 624, PT 625, PT 626, PT 640, PT 646

This seminar is the first designed for advanced study and mentoring in physical therapy research. Students will be participating in faculty-directed research projects. Students' activities will vary depending on the faculty member and research project being conducted. Students are required to perform at least 50 hours of activities toward the directed research project to receive credit for this course. This course satisfies one of two requirements for selected seminars in the curriculum.

PT 660B. Graduate Physical Therapy Seminar IB: Research. 1 Unit

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640 and PT 646.

Corequisite(s): PT 627, PT 644, PT 645, PT 648, PT 662, PT 669.

This seminar is the second designed for advanced study and mentoring in physical therapy research. Students will be participating in faculty-directed research projects. Students' activities will vary depending on the faculty member and research project being conducted. Students are required to perform at least fifty hours of activities toward the directed research project to receive credit for this course. This course satisfies one of two requirements for selected seminars in the DPT curriculum.

Note: Open to Physical Therapy majors only.

PT 660C. Graduate Physical Therapy Seminar IC: Research. 1 Unit

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 627, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, PT 644, PT 645, PT 646, PT 648, PT 662, PT 669.

Corequisite(s): PT 663, PT 664, PT 665, PT 668, PT 680, PT 690.

This seminar is the third designed for advanced study and mentoring in physical therapy research. Students will be participating in faculty directed research projects. Students' activities will vary depending on the faculty member and research project being conducted. Students are required to perform at least 50 hours of activities toward the directed research project to receive credit for this course. This course satisfies one of two requirements for selected in the DPT curriculum.

Note: Open to Physical Therapy majors only.

PT 660D. Graduate Physical Therapy Seminar ID: Electrotherapeutics. 2 Units

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 627, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, PT 646.

Corequisite(s): PT 627, PT 644, PT 645, PT 648, PT 662, PT 669.

This is a seminar laboratory experience focusing on electrophysiology and electrodiagnostics in physical therapy. The lab will allow students to research and apply evidence-based practice and gain advanced hands-on practice in performing and interpreting the results of electromyographic and nerve conduction velocity testing with clients. This course satisfies one of two requirements for selected seminars in the curriculum.

Note: Open to Physical Therapy majors only.

PT 660E. Graduate Physical Therapy Seminar IE: NeuroPediatric Laboratory. 2 Units

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 627, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, PT 644, PT 645, PT 646, PT 648, PT 662, PT 669.

Corequisite(s): PT 663, PT 664, PT 665, PT 668, PT 680, PT 690.

This seminar laboratory experience focuses on pediatric patient management. The lab will allow students to research and apply evidence-based practice and gain advanced hands-on practice in pediatric physical therapy. This course is best suited for students planning a career in pediatric patient management. The course satisfies one of two requirements for selected seminars in the curriculum.

Note: Open to Physical Therapy majors only.

PT 660F. Graduate Physical Therapy Seminar IF: Adult Neuromuscular Laboratory. 2 Units

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 627, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, PT 646, PT 644, PT 645, PT 648, PT 662, PT 669.

Corequisite(s): PT 663, PT 664, PT 665, PT 668, PT 680, PT 690.

This seminar laboratory experience focuses on adult neuromuscular patient management. The laboratory will allow students to research and apply evidence-based practice and gain advanced hands-on practice in adult neurorehabilitation. Students will also serve as mentors for the Mock Clinic portion of PT 624. This course satisfies one of two requirements for selected seminars in the curriculum.

Note: Open to Physical Therapy majors only.

PT 660G. Certified Strength and Conditioning Specialist (CSCS). 2 Units

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, PT 644, PT 645, PT 646, PT 648, PT 662, PT 669.

Corequisite(s): PT 663, PT 664, PT 665, PT 668

This seminar is designed to prepare students to take the Certified Strength and Conditioning Specialist Examination. The seminar covers the topics of exercise physiology, bioenergetics, nutritional factors in performance, resistance, speed, and agility training, endocrine responses to resistance training, exercise testing, and other training considerations. This course satisfies one of two requirements for selected seminars in the curriculum.

Note: Open to Physical Therapy majors only.

PT 660H. Graduate Physical Therapy Seminar H: Cardiovascular Wellness Clinic Experience. 1 Unit

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, PT 644, PT 645, PT 646, PT 648, PT 662, PT 669.

This elective provides mentored clinical experience for students in the area of cardiovascular well ness. The student will design and implement an evaluation of a volunteer client in a cardiovascular well ness program, develop an individualized plan of care, and monitor the impact of the intervention. A written comprehensive case report will analyze the impact of the interventions on the cardiovascular well ness of the client.

Note: Open to Physical Therapy majors only.

PT 662. Differential Diagnosis in Physical Therapy. 3 Units

Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640 and PT 646.

Corequisite(s): PT 627, PT 644, PT 645, PT 648, PT 669.

This course focuses on learning and practicing screening techniques for physical therapists to detect medical or other problems for which a referral to a medical doctor or another health care provider is indicated. Students will learn to screen patients for dysfunction in a variety of physiological systems by taking medical history, medication history, performing a risk factor assessment and manual examination, and screening various physiological systems.

Note: Open to Physical Therapy majors only.

PT 663. Integumentary Patient Management. 2 Units

Prerequisite(s): BIO 633, PT 600, 602, 604, 606, 608, 614, 618, 620, 622, 624, 625, 626, 627, 630, 632, 634, 636, 638, 640, 644, 645, 646, 648, 662, 669 and 695A.

Corequisite(s): PT 664, PT 665, PT 668, PT 680, PT 690.

This course focuses on the management of patients with integumentary impairments and their related sequelae. Topics include post-surgical management of patients with amputations, prosthetics, and management of the patient with a wound or burn injury. Lecture, case presentation, video demonstrations, and laboratory activities will be used to develop patient management skills.

Note: Open to Physical Therapy majors only.

- PT 664. Neuropediatric Patient Management. 2 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 627, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, PT 644, PT 645, PT 646, PT 648, PT 662, PT 669 and PT 695A.
Corequisite(s): PT 663, PT 665, PT 668, PT 680, PT 690.
 This course is the third part of a three course series focusing on the acquisition and integration of knowledge and skills involved in developing and implementing a treatment plan based on sound evaluative findings for the patient with neurological dysfunction. In this course, the focus is on the pediatric patient with neurological dysfunction. Case presentation, video demonstrations, and actual patient contact will be used to develop evaluation, treatment, and problem-solving skills.
Note: Open to Physical Therapy Majors only.
- PT 665. Musculoskeletal Patient Management III. 3 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 627, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, PT 644, PT 645, PT 646, PT 648, PT 662, PT 669, PT 695A. Corequisite: PT 663, PT 664, PT 668, PT 690.
 This course builds on the foundational intervention techniques established for management of the patient with musculoskeletal dysfunction in PT 625 and PT 645. It will address additional manual therapy skills and students will apply their developing skills under faculty supervision to patients referred from the Student Health Center. Students will be responsible for patient management of a case load including accurate documentation and submission of patient records to the Student Health Center.
Note: Open to Physical Therapy Majors only.
- PT 668. Health Care Delivery in Physical Therapy II. 2 Units**
Prerequisite(s): BIO 633, PT 600, 602, 604, 606, 608, 614, 618, 620, 622, 624, 625, 626, 627, 630, 632, 634, 636, 638, 640, 644, 645, 646, 648, 662, 669 and 695A.
Corequisite(s): PT 663, PT 664, PT 665, PT 680, PT 690.
 In this course, students will have professional practice behavior expectations and requirements previously introduced in other courses reinforced through the review of the American Physical Therapy Association documents: the Standard of Practice for Physical Therapy and the Code of Ethics, as well as the State of California's Physical Therapy Practice Act. Additionally, students will hear from other health care professionals on their expectations of the physical therapist's role on a health care team.
Note: Open to Physical Therapy majors only.
- PT 669. Psychosocial Issues in Physical Therapy. 1 Unit**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640 and PT 646.
Corequisite(s): PT 627, PT 644, PT 645, PT 648, PT 662.
 This course examines psychological and social impact of and reactions to illness and physical disability. Explores elements of the psycho-social dynamics related to disability with a focus on adjustments required of the disabled and the provider. The course addresses social, cultural, personal, and familial factors which impact comprehensive rehabilitation in the clinical setting. Attention will be placed on interpersonal relationships between patients, family, health care providers, and society.
Note: Open to Physical Therapy majors only.
- PT 680. Graduate Physical Therapy Seminar II. 1 Unit**
Prerequisite(s): BIO 633, PT 600, 602, 604, 606, 608, 614, 618, 620, 622, 624, 625, 626, 627, 630, 632, 634, 636, 638, 640, 644, 645, 646, 648, 662 and 669.
Corequisite(s): PT 663, PT 664, PT 665, PT 668, PT 690.
 This course, presented just prior to the final clinical internships, will review student's experiences in the curriculum and promote reflection on the professional practice of physical therapy. The course will review professional core values and expectations for clinical internships. The course will also review portfolio requirements to determine students' readiness to proceed into final internships. In addition, students will be expected to develop five year personal professional development plans.
Note: Open to Physical Therapy majors only.
- PT 689. Doctoral Project Proposal. 1 Unit**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, and PT 646
Corequisite(s): PT 627, PT 644, PT 645, PT 648, PT 662, and PT 669
 The Doctoral Project Proposal must demonstrate students' understandings of the application of current evidence-based practice in a multicultural and complex health care environment. The proposal must be of sufficient rigor to ensure students' demonstrations of critical and independent thinking and abilities to interpret the research literature and apply to current physical therapist practice. The proposal includes a written document and oral defense. Open to Physical Therapy Majors only.
 Credit/No Credit
- PT 690. Doctoral Project/Culminating Experience. 3 Units**
Prerequisite(s): BIO 633, PT 600, PT 602, PT 604, PT 606, PT 608, PT 614, PT 618, PT 620, PT 622, PT 624, PT 625, PT 626, PT 627, PT 630, PT 632, PT 634, PT 636, PT 638, PT 640, PT 644, PT 645, PT 646, PT 648, PT 662, PT 663, PT 664, PT 665, PT 668, PT 669, PT 680, and PT 695A
 The Doctoral Project/Culminating Experience may include evidence-based practice projects, clinical research projects, or case reports consistent with the Chancellor's Office Executive Order. Culminating events must demonstrate students' understandings of the application of current evidence-based practice in a multicultural and complex health care environment. They must be of sufficient rigor to ensure students' demonstrations of critical and independent thinking and abilities to interpret the research literature and apply to current physical therapist practice.
- PT 695A. Clinical Internship I. 6 Units**
Prerequisite(s): BIO 633, PT 600, 602, 604, 606, 608, 614, 618, 620, 622, 624, 625, 626, 627, 630, 632, 634, 636, 638, 640, 644, 645, 646, 648 and PT 669
 This first component of the clinical certificate series of the Doctor of Physical Therapy (DPT) program curriculum totals 12 weeks of progressively responsible full-time clinical education per student under the direct supervision of a licensed physical therapist. Students improve and refine evaluation and treatment abilities developed during their first two academic years and integrate knowledge and skills in a selected variety of clinic settings.
Note: Open to Physical Therapy majors only who have successfully completed the first two years of the DPT curriculum.
 Credit/No Credit

PT 695B. Clinical Internship II. 6 Units

Prerequisite(s): BIO 633, PT 600, 602, 604, 606, 608, 614, 618, 620, 622, 624, 625, 626, 627, 630, 632, 634, 636, 638, 640, 644, 645, 646, 648, 669 and 695A.

This second component of the clinical education series of the Doctor of Physical Therapy (DPT) program curriculum totals twelve weeks of progressively responsible full-time clinical education under the direct supervision of a licensed physical therapist. Students improve and refine patient management skills and abilities developed during their first seven semesters and integrate knowledge and skills in a selected clinical setting.

Note: Open to Physical Therapy majors only who have successfully completed the first seven semesters of the DPT curriculum.

Credit/No Credit

PT 695C. Clinical Internship III. 6 Units

This third component of the clinical education series of the Doctor of Physical Therapy (DPT) program curriculum totals twelve weeks of progressively responsible full-time clinical education under the direct supervision of a licensed physical therapist. Students improve and refine patient management skills and abilities developed during their first eight semesters and integrate knowledge and skills in a selected clinic setting.

Note: Open to Physical Therapy majors only who have successfully completed two years of the DPT curriculum. Prerequisite

Credit/No Credit

PT 696J. Graduate Physical Therapy Seminar IJ Adv. Biomechanics I. 2 Units

Prerequisite(s): BIO 633, PT 600, PT 602, PT 608, PT 630, PT 604, PT 606, PT 614, PT 618, PT 620, PT 622, PT 632, PT 634, PT 636, PT 638, PT 624, PT 625, PT 626, PT 640, and PT 646

Corequisite(s): PT 627, PT 644, PT 645, PT 648, PT 669, and PT 662
This elective is designed to prepare students to run a gait analysis clinic in the biomechanics laboratory. The course is one unit of lecture and one unit of lab, and covers the topics of assessment of balance, lower extremity strength assessment, special tests, and running analysis from both the research "gold standard" as well as the clinically feasible perspective with a particular focus on running.

Note: Fall semester only