William Carey University Physical Therapy Program

Curriculum

The curriculum can best be described as a blended curriculum, with foundational sciences and basic physical therapy skills taught in the first year in integrated fashion. Many of the foundational sciences are taught in collaboration with the Master of Biomedical Science Degree, and will be cross listed in the catalog as such. The second and third year focus on patient management in each of four physical therapy practice areas; musculoskeletal, neuromuscular, cardiopulmonary and integumentary. Most trimesters of the program contain a clinical decision making course, which is a case based small group course designed for advanced mentoring in clinical decision making algorithms. Thirty-three (33) weeks of full time clinical practice are included in the curriculum, as well as a professional development track containing concepts in legal/ethical issues, practice management, and professionalism in practice. Evidence-based practice courses are strategically placed in the curriculum to allow small groups of learners to develop research questions, collect data, and draw conclusions from the evidence regarding physical therapy principles under the mentorship of faculty. Finally, multiple opportunities exist in the curriculum for inter-professional training with nursing, doctor of osteopathy, education, and health information management programs.

The proposed course offerings are as follows:

**Year One**

**Fall Trimester**

Gross Anatomy I (4)

Human Physiology I (3)

Biomechanics I (2)

Principles of Physical Therapy Practice I (1)

**Physiology II (3)**

**Biomechanics II (2)**

Principles of Physical Therapy Practice II (1)

**January Term**

Foundations of Professionalism I (2)

**Winter Trimester**

Gross Anatomy II (4)

Principles of Physical Therapy Practice III (1)
Spring Trimester

Neuroscience (3)

Neuromuscular Conditions I (3)

Exercise Physiology (3)

Experiential Learning I (2)

Clinical Decision Making II (1)

Winter Trimester

Musculoskeletal Conditions II (3)

Physical Agents (2)

Summer Session

Neuromuscular Conditions II (3)

Principles of Physical Therapy Practice IV (1)

Evidence-Based Practice I (3)

Clinical Decision Making I (1)

Biomechanics III (2)

Spring Trimester

Clinical Decision Making III (1)

Neuromuscular Conditions III (3)

Cardiopulmonary Conditions (3)

Integumentary Conditions (3)

Total Semester Hours Year One - 43

Year Two

Winter Trimester II

Experiential Learning II (6)

Fall Trimester

Musculoskeletal Conditions I (3)

Wellness and Preventive Practice (2)

Evidence-Based Practice II (2)

Foundations of Professionalism II (2)

Spring Trimester

Musculoskeletal Conditions III (3)

Foundations of Professionalism III (2)

Clinical Decision Making IV (1)

Disability through the Lifespan (2)

Summer Session

Musculoskeletal Conditions III (3)

Clinical Decision Making IV (1)
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<tr>
<th>Year Three</th>
<th>Spring Trimester</th>
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<tbody>
<tr>
<td></td>
<td>Advanced Clinical Decision Making (4)</td>
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<td>Elective (2)</td>
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<td>Fall Trimester/Winter Session</td>
<td>Evidence Based Practice III (2)</td>
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<td>1/January Term</td>
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<td>Winter Session 2</td>
<td>Total Semester Hours Year Three - 37-39</td>
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<td>Foundations of Professionalism IV (2)</td>
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<td>Service Learning (1)</td>
<td>Grand Total Semester Hours - 120-122</td>
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Course Descriptions

Year One

*Gross Anatomy I - An introduction to the reciprocal interrelationship between the anatomical structure and function of the human body as a whole. Lecture and exposure to human cadavers provides an enriched learning experience which allows the learner to develop a working mental image of the human body and how it functions. Includes significant components of human neuroanatomy, embryology and diagnostic testing.

*Gross Anatomy II - Continuation of Gross Anatomy I. An introduction to the reciprocal interrelationship between the anatomical structure and function of the human body as a whole. Lecture and exposure to human cadavers provides an enriched learning experience which allows the learner to develop a working mental image of the human body and how it functions. Includes significant components of human neuroanatomy, embryology and diagnostic testing.

*Physiology I - A study of the chemical and physical bases of life. This course in medical physiology involves the study of fundamental concepts, principles, and details specifically related to cellular, membrane, organ system, and whole organism function. The course lays the foundation for the study of the mechanisms of disease, the mechanism of action of drugs, and other natural phenomena important to both the basic and clinical medical sciences (including pharmacology).

*Physiology II - Continuation of Physiology I. A study of the chemical and physical bases of life. This course in medical physiology involves the study of fundamental concepts, principals, and details specifically related to cellular, membrane, organ system, and whole organism function. The course lays the foundation for the study of the mechanisms of disease, the mechanism of action of drugs, and other natural phenomena important to both the basic and clinical medical sciences.

*Biomechanics I - The study of the mechanical and anatomical principles that govern human motion. The learner will develop the ability to link the structure of the human body with its function. Focus is on joint structure and function of the lower quadrant. Focus is on joint structure and function of the upper quadrant. Co-requisite: Gross Anatomy I.
Biomechanics II - Continuation of Biomechanics Series. The study of the mechanical and anatomical principles that govern human motion. The learner will develop the ability to link the structure of the human body with its function. Focus is on joint structure and function of the upper quadrant. Focus in on joint structure and function of the lower quadrant. Co-requisite: Gross Anatomy II.

Principles of Physical Therapy Practice I - Fundamental physical therapy examination and treatment techniques of the upper quadrant, including range of motion, and strength testing as well as outcomes measurement. Also includes draping, positioning, and basic therapeutic exercise. Co-requisite: Biomechanics I.

Principles of Physical Therapy Practice II - Fundamental physical therapy examination and intervention techniques of the lower quadrant to include range of motion, strength, and outcomes measurement. Also includes draping, positioning, and basic therapeutic exercise. Co-requisite: Biomechanics II.

Principles of Physical Therapy Practice III - Foundational mobility skills such as transfer techniques, and introduction to use of basic mobility devices such as wheelchairs, walkers, and canes.

Principles of Physical Therapy Practice IV - Fundamental assessment and treatment skills relevant to the neurologic population, including sensory, reflex, balance and associated outcome measures. Pre-requisite: Human Neuroscience.

Foundations of Professionalism I - Introduction to legal/ethical issues, professional roles, and selected health services delivery and administration topics. First course in the professionalism series.

*Human Neuroscience - Coverage includes pathophysiology of common diseases of the nervous
system (including visual, auditory, and vestibular systems) and the general principles underlying diagnosis and management. It also examines the major psychiatric syndromes including psychotic, mood, and anxiety disorders. Diagnostic criteria, signs, and symptoms, as well as course, treatment, and prognosis, are reviewed along with biological and psychosocial knowledge of each psychiatric syndrome.

Exercise physiology - Concepts of exercise science including response of cardiopulmonary, musculoskeletal, neuromuscular, integumentary, and endocrine systems to exercise. Pre-requisite: Physiology I, Physiology II.

Co-requisite: Human Neuroscience.

Neuromuscular Conditions II - Principles of physical therapy examination, diagnosis and treatment of the adult patient with a neuromuscular condition. Includes brain attack, traumatic brain injury, spinal cord injury, and chronic neuromuscular conditions. Pathology, imaging, pharmacology, differential diagnosis are included. Pre-requisite: Neuromuscular Conditions I.

Wellness and Preventative Practice - Essential concepts of health, wellness, screening for risk, and the theoretical bases underlying behavior change. These are applied on individual as well as global bases. Pre-requisite: Exercise physiology.

Evidence Based Practice I - Fundamental concepts of scholarly activity in physical therapy. Includes statistical analysis, research methods, and analysis of scientific literature. First course in the EBP Series.
Experiential Learning I - Clinical practice in an assigned clinical setting for part-time clinical education experience, practicing clinical skills learned to date in a patient care setting under direct supervision of clinical faculty and staff. Learners in good academic standing who have satisfactorily completed to-date professional coursework, who demonstrate acceptable professional behaviors as defined in the handbook, and who have passed all cumulative trimester exams may participate.

Clinical Decision Making I - Application of critical thinking and clinical reasoning models. Case-based course integrating concepts covered in the first year of study. First course of the clinical decision making series.

**Year Two**

Musculoskeletal Conditions I - Principles of physical therapy examination, diagnosis, and intervention for the patient with an upper extremity orthopedic diagnosis. Pathology, imaging, pharmacology, differential diagnosis are included. Pre-requisite: Biomechanics I.

Musculoskeletal Conditions II - Principles of physical therapy examination, diagnosis, and intervention for the patient with a lower extremity orthopedic diagnosis. Pathology, imaging, pharmacology, and differential diagnosis are included. Pre-requisite: Biomechanics II.

Musculoskeletal Conditions III - Principles of physical therapy examination, diagnosis and intervention of the patient with an orthopedic spinal condition. Pathology, imaging, pharmacology, and differential diagnosis are included. Pre-requisite: Biomechanics III.

Biomechanics III - Continuation of Biomechanics I and II. The study of the mechanical and anatomical principles that govern human motion. Focus is on postural and balance mechanism and the analysis of normal and abnormal locomotion.

Evidence Based Practice II - Continuation of Evidence Based Practice series. Development of a research question, methodology, and data collection to assess the evidence surrounding a
physical therapy topic. Guided by faculty mentors, small groups of learners will plan and begin implementation of a case study, systematic review of the literature, or original research.

Foundations of Professionalism II - Continuation of Professionalism Series. Intermediate study of legal/ethical issues and professional roles, as well as health services delivery and administration topics.

Foundations of Professionalism III - Continuation of the Professionalism course series. Advanced study of legal/ethical issues and professional roles, as well as health services delivery and administration topics.


Physical Agents - Theory and application of air, water, heat, cold, electricity, sound radiant energy and other physical and chemical modalities as part of a comprehensive physical therapy plan of care.

Experiential Learning II - Clinical practice in an assigned clinic for 6 weeks of full-time clinical experience. Learners will participate in the assessment and intervention of simple and familiar
Neuromuscular Conditions III - Learners will explore and apply a framework for the examination and intervention of children aged birth to adolescence who have neurological disabilities. Learners will describe the mechanism of the neurological disability, assess characteristics of the child and environment, and plan context specific interventions and supports.

Cardiopulmonary Conditions - Principles of physical therapy examination, diagnosis, and treatment of patients across the lifespan with a cardiopulmonary condition or complication. Pathology, imaging, pharmacology, and differential diagnosis are included.

Integumentary Conditions - Principles of physical therapy examination, diagnosis, and treatment of patients across the lifespan with an integumentary condition or complication. Pathology, imaging, pharmacology, and differential diagnosis are included.

Disability through the Lifespan - The study of bio-psychosocial and environmental implications of clients living with a disability from infancy through advanced aging. Includes motivational theory, environmental barriers, and cultural effects.

Year Three

Experiential Learning III - The learner will be assigned to a participating clinic for 15 weeks of full-time clinical experience. Learners will perform patient examinations and intervention under mentored supervision of clinical faculty. Learners who have satisfactorily completed to-date professional coursework, who demonstrate acceptable professional behaviors as defined in the handbook, and who have passed all cumulative trimester exams are eligible to enroll.
Foundations of Professionalism IV - Final course in the professionalism series. Advanced study of legal/ethical issues and professional roles, as well as health services delivery and administration topics. Generation of a portfolio demonstrating professional growth is required.

Service Learning - The learner will develop, implement, and present results of a community service project in the health services sector.

Evidence Based Practice III - Culmination of the Evidence Based Practice Series - Learner groups, in conjunction with mentoring faculty will complete research efforts, and create a poster presentation, platform presentation, or manuscript draft of the project developed in Evidence Based Practice II.


Experiential Learning IV - Learners will manage a patient case load under mentored supervision of clinical faculty having been assigned to a clinic for 12 weeks of full-time clinical experience.

Learners who have satisfactorily completed all professional coursework, who demonstrate acceptable professional behaviors as defined in the handbook, and who have passed all cumulative trimester exams and previous Experiential Learning courses are eligible to enroll.

Electives - Learners may elect to enroll in independent or small group studies during the final semester, utilizing a faculty mentor to acquire advanced competencies in clinical concepts, management, research, teaching, or professional development. Initiated by either learner or faculty on an as needed basis.

*Taught in collaboration with the MBS program, and cross-listed in the catalog.