

Physical Therapy

College of Health
and Human Services

Department of Physical Therapy

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<http://www.csufresno.edu/physicaltherapy>

B.S., Interdisciplinary Health and Rehabilitation Sciences

Options:

- Pre-Occupational Therapy
- Pre-Physical Therapy
- Pre-Rehabilitation Services

M.P.T., Master of Physical Therapy Minor in Interdisciplinary Health and Rehabilitation Sciences

Physical Therapy

Physical therapists, or PTs, are health care professionals who evaluate and treat people with health problems resulting from injury, disease, or biomechanical dysfunction. Physical therapists are integral members of the primary care team and are involved in prevention of disability and promotion of positive health. They are also acting consultants in restorative care.

Physical therapy includes the following:

1. Examining and evaluating patients with health-related conditions, impairments, functional limitations, and disability in order to determine diagnosis, prognosis, and intervention;
2. Alleviating impairments and functional limitations by designing, implementing, and modifying therapeutic interventions;
3. Preventing injury, impairments, functional limitations, and disability while promoting and maintaining fitness, health, and quality of life in all age populations; and
4. Engaging in consultation, education, and research.

Career Opportunities

Physical therapists practice in acute care or subacute care hospitals, private physical therapy offices, community health centers, industrial health centers, sports facilities, rehabilitation centers, nursing homes, home

health agencies, schools, or pediatric centers. Others work in research institutions or teach in colleges and universities.

Faculty and Facilities

The faculty is composed of physical therapists that collectively have advanced preparation in all major areas of physical therapy. Most have earned doctorates or advanced specialty certification. Together they represent extensive years of clinical experience. Many faculty members continue to engage in practice in tandem with their faculty responsibilities. Several have held significant positions of leadership in professional associations and have authored textbooks used nationally; several also publish regularly in professional journals. Their efforts have been recognized frequently with prestigious awards from the profession and the community.

Clinical laboratory experiences are conducted in a variety of health care facilities throughout the state of California and out of state on a limited basis.

Faculty

Janet K. Duttarer, *Chair*
Annie Burke-Doe
Kathleen A. Curtis
Joanne M. Laslovich
Gary L. Lentell
Robert K. Martin
Marilyn Miller
Peggy Trueblood
Toni Tyner

Physical Therapy Education

The Department of Physical Therapy offers an undergraduate pre-physical therapy option and a Master of Physical Therapy program which meet pre-professional and professional education requirements to become a licensed physical therapist in all 50 states.

Interdisciplinary Pre-Health and Rehabilitation Professions Education

The B.S. degree in Interdisciplinary Health and Rehabilitation Sciences offers preprofessional options in Pre-Physical Therapy, Pre-Occupational Therapy and Pre-Rehabilitation Services. These degree options prepare students to meet the prerequisite requirements of graduate programs in Physical Therapy, Occupational Therapy, and Rehabilitation Counseling.

In addition to the major, a minor in Interdisciplinary Health and Rehabilitation Sciences is recommended for students pursuing ca-

reer paths in other health and human service professions, such as nursing, communicative disorders, health science, dietetics, dentistry, chiropractic, medicine, optometry, clinical psychology and counseling.

B.S. in Interdisciplinary Health and Rehabilitation Sciences

The major is designed to prepare undergraduate university students with prerequisite coursework, knowledge, attitudes and skills that will help them to gain admission to and succeed in graduate programs in the rehabilitation and health professions.

Rehabilitation professionals provide specialized services that enhance the function, self-care, mobility, vocational potential, communication or adaptive skills of persons with disabilities. Professional education for rehabilitation professions requires graduate education. Integrated service delivery models require training in collaborative processes that share goals for patients and clients. Such goals can be met through an interdisciplinary program.

Bachelor of Science Degree Requirements

Interdisciplinary Health and Rehabilitation Sciences Major

The IHRS major requires 30 units of core coursework from several disciplines. Core course content includes professional, developmental, health, ethical, psychosocial and behavioral issues related to aging, illness, and disability.

A major in Interdisciplinary Health and Rehabilitation Sciences requires a minimum of 60 units of study, which includes completion of the 30 unit core and one option (30-45 units). The General Education requirement, special course requirements, and electives complete a total of at least 121 units required for the B.S.

Note: Students may not fulfill option requirements with courses taken to fulfill core requirements.

<i>Interdisciplinary Health and Rehabilitation Sciences</i>	<i>Units</i>
Major requirements	60-75
Core Program (required of all options)	29-30

<i>Lower-Division Requirement</i>	
HS 92	(3)
<i>Upper-Division Requirements</i>	
HHS 10 or PTH 102 or COUN 102; GERON 115 or HS 115; HS	

114; PSYCH 169 or RLS 125;
 PHTH 105, 106, 107, 127 (23-24)
Select 3 units from the following:
 CSD 91/92, 80; GERON 10S;
 GERON 125 or SWRK 125; HS
 90, 131, 182, 190; KINES 118,
 137; PHTH 190; RLS 101, 142;
 SWRK 135 (3)

Select one of the following options 30-45

Pre-Occupational

Therapy Option (37-38)
 ART 60 or 70; ANTH 2; COUN 174
 or PSYCH 174; PHYAN 64 or
 PHTH 119; PHYAN 65; PHYS 2A;
 PSYCH 10; PSYCH 155 or CFS 38;
 PSYCH 166

Select a minimum of 6 units from the following: CHEM 153; COUN 174 or PSYCH 174; CSD 91 or 92, 80, 98, 158; ECON 162; EHD 108; GERON 10S; GERON 18 or WS 18; GERON 125 or SWRK 125; GERON 139, 161; GERON 148 or KINES 148; HS 90, 104, 109, 129, 130, 131, 141, 151, 163, 182, 190; ID 145; KINES 109, 116, 118, 137, 163; NSCI 131; NURS 124; PHTH 119; PHTH 126; PHTH 190; PHYAN 140, 163; PSYCH 103 or GERON 103; PSYCH 169; RLS 101, 142; SOC 147; SPAN 1A or 1B; SWRK 135, 137; WS 134

Pre-Physical Therapy Option (45)

CHEM 3A, 3B; NURS 124; PHTH 119, 125, 126; PHYAN 65, 140; PHYS 2A, 2B; PSYCH 10

Select a minimum of 6 units from the following: CLS 158; CSD 91 or 92, 80, 98; ECON 162; EHD 108; GERON 10S; GERON 18 or WS 18; GERON 125 or SWRK 125; GERON 139, 161; GERON 148 or KINES 148; HS 90, 104, 109, 129, 130, 131, 141, 151, 163, 182, 190; ID 145; KINES 109, 116, 118, 137, 163; PHTH 190; PHYAN 163, 165; PSYCH 103 or GERON 103; RLS 142; SOC 147; SPAN 1A or 1B; SWRK 135, 137; WS 134

Pre-Rehabilitation

Services Option (30)

COUN 174 or PSYCH 174; COUN 176 or PSYCH 166; HS 110, 111; PHTH 119 or PHYAN 64; PHYAN 65; PSYCH 10

Select a minimum of 6 units from the following: CLS 158; CSD 91 or 92, 80, 98; ECON 162; EHD 108; GERON 10S; GERON 18 or WS

18; GERON 125 or SWRK 125; GERON 139, 161; GERON 148 or KINES 148; HS 90, 104, 109, 129, 130, 131, 141, 151, 163, 182, 190; KINES 109, 116, 118, 137; NURS 124; RLS 101, 142; PHTH 190; PSYCH 155 or CFS 38; PSYCH 103 or GERON 103; PSYCH 169; SOC 147; SPAN 1A or 1B; SWRK 135, 137; WS 134

General Education requirements 51 Electives and remaining

degree requirements 1-16*
 (See *Degree Requirements*); includes upper-division writing skills

Total 121

*This total indicates that 3 units of PSYCH 10 in G.E. Breadth D3 and one of the following G.E. courses are being applied to the IHRS major: CHEM 3A or PHYS 2A (B1); CSD 92 or SPAN 1B (C2); GERON 10S, CFS 38, HS 90, or SW 20 (E1).

Students seeking admission to the bachelor of science degree program may apply at any point in their undergraduate program. Majors in Interdisciplinary Health and Rehabilitation Sciences (IHRS) must be in good standing with the university and must maintain an overall GPA of 2.5 after admission to the major. This is a minimum as the GPA requirements for admission to graduate programs in the rehabilitation professions may be considerably higher. To enroll in upper division courses, students must have already taken designated lower division courses. Students must meet course prerequisite requirements.

This curriculum is intended to prepare the student with an interdisciplinary perspective to enter graduate programs in physical therapy, occupational therapy and rehabilitation counseling. There may be additional requirements for admission to graduate programs.

Students are required to see an adviser in Interdisciplinary Health and Rehabilitation Sciences for assistance in planning the major.

Minor in Interdisciplinary Health and Rehabilitation Sciences

The minor introduces undergraduate university students to the concepts of rehabilitation and health care to augment a pre-professional program of study for students seeking careers in the health field.

Minor Requirements

The IHRS minor requires 24 units of core coursework from several disciplines. This coursework is intended to provide an interdisciplinary perspective for any health profession. Core course content includes professional, developmental, health, ethical, psychosocial and behavioral issues related to aging, illness, and disability.

CORE:

Lower-Division Requirement (3 units)
 HS 92

Upper-Division Requirements (15 units)
 HHS 10 or PHTH 102, GERON 115 or HS 115, PHTH 105, PHTH 106, PHTH 107

Elective Requirements (6 units)

Students must select electives from the following pool:

CSD 91/92, 80; CLS 101; GERON 10S; GERON 125 or SWRK 125; HS 90, 131, 182, 190; KINES 118, 137; PHTH 190; RLS 101, 142, SWRK 20, 135

Total required units 24

Students seeking admission to the minor in Interdisciplinary Health and Rehabilitation Sciences (IHRS) may apply at any point in their undergraduate program. Students who minor in Interdisciplinary Health and Rehabilitation Sciences (IHRS) must be in good standing with the university and must maintain an overall GPA of 2.50 after admission to the minor. Students must meet prerequisite requirements for individual courses.

Students are required to see an adviser in interdisciplinary health and rehabilitation sciences for assistance in planning the minor.

Note: The IHRS Minor also requires 6 upper-division units in residence.

Master of Physical Therapy

Physical therapy practice today is based on a well-developed body of scientific and clinical knowledge. Physical therapists apply knowledge from the basic, behavioral, and social sciences. Physical therapists must also demonstrate effective communication skills. Insight and sensitivity to the unique needs of diverse populations is essential to effectively maximize the individual's functional potential in society.

The physical therapy student will be educated with a thorough knowledge base and

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will be capable of critical thinking, ethical practice, and service to meet the changing needs of society. Students learn effective analysis and interpretation of data with which to diagnose neuromusculoskeletal movement dysfunction, make treatment-planning decisions, and predict outcomes based on sound research principles.

The graduate will be prepared to assume the multidimensional roles of the master clinician, including patient care, education, consultation, and administration of physical therapy services in the broad spectrum of physical therapy practice settings and across the broad age spectrum from neonates to geriatrics.

Individuals must possess a baccalaureate degree and complete all prerequisite requirements prior to beginning the professional major. Following successful completion of the professional curriculum, the student receives the M.P.T.

Completion of a postgraduate internship is required to be eligible to seek a license to practice physical therapy in the state of California.

Admissions to Master of Physical Therapy Graduate Program

Students are only admitted in the fall semester. Students should apply to the program in the fall prior to anticipated entry into the Physical Therapy Program. Admission to the Master of Physical Therapy program requires two applications: (1) the California State University Graduate Application, which can be submitted online at <http://www.csumentor.edu>, and (2) the Physical Therapy Department application, which can be downloaded from the department web site at <http://www.csufresno.edu/physicaltherapy>. Review the *Graduate Studies* section in this catalog for graduate admissions information.

Postbaccalaureate students may apply to the university as "postbaccalaureate undeclared" to pursue prerequisite courses. For these postbaccalaureate applicants, only the CSU Graduate Application, indicating "Undeclared" as the major/objective, should be submitted.

Physical Therapy Applications are available: **July 1.**

Physical Therapy Application Filing Period: **October 1 through November 30.**

A complete application includes an information application, an official transcript from each institution attended including previous spring and summer terms, official GRE test

scores, observation verification, and letters of reference. GRE scores are considered during program admissions; however, there is no minimum GRE requirement. Late transcripts or documentation will result in not being considered. Follow program application instructions.

Pre-Admission Requirements for Master of Physical Therapy Program

Lower-division

Anatomy and Physiology

Fresno State: PHTH 119, PHYAN 65

Transfer: Human anatomy with lab and human physiology with lab.

Chemistry

Fresno State: CHEM 1A or 3A, and CHEM 3B

Transfer: Inorganic and organic or biochemistry with labs

Psychology

Fresno State: PSYCH 10

Transfer: General psychology

Physics

Fresno State: PHYS 2A, 2B

Transfer: Physics with lab including mechanics, heat, light, sound, and electricity

Statistics

Fresno State: HS 92

Transfer: Introduction to basic statistics

Upper-division

Psychology

Fresno State: PSYCH 169 or RLS 125

Transfer: Psychology of disability course

Biological Sciences

Fresno State: PHYAN 140

Transfer: Neurophysiology course

The screening committee reviews admission criteria. Prior to admission to the program, the applicant must meet the following requirements:

1. Hold or be eligible to receive a bachelor's degree by the end of the spring semester prior to admission to the program.
2. Have completed or be currently enrolled in the specified lower-division prerequisite courses at time of application. All lower-division courses must be completed by the end of the fall semester prior to admission to the program.
3. Submit GRE test scores by the end of the fall semester prior to admission to the program. Students are encouraged to take the GRE early to avoid delays in acceptance for graduate work.
4. Enroll in upper-division prerequisite courses during the spring semester prior to admission to the program

5. Receive a grade of **C** or better in each prerequisite course and maintain a total prerequisite GPA of 3.0. An overall GPA of 2.5 on the last 60 units completed is required. The Department of Physical Therapy recommends an overall GPA of 3.0 on the last 60 units completed. **CR/NC** grades, correspondence courses, or independent study courses cannot be used for prerequisite requirements. Only those prerequisite courses completed by the end of the fall semester in which application is made will be counted toward ranking of candidates for selection into the graduate program.
6. Provide evidence of knowledge of physical therapy through employment, volunteer work, or observation in a physical therapy department for a minimum of 100 hours. Fifty hours must be in a general in-patient care setting; 50 hours may be in a special area of practice. All observation hours must be under the supervision of a licensed physical therapist.
7. Submit three letters of recommendation, as specified in application instructions.
8. Participate in a personal interview.
9. Submit grades and final transcripts from institutions other than Fresno State as soon as grades are posted. Transcripts should be requested prior to the end of the term.

Meeting the foregoing criteria does not guarantee acceptance into the Master of Physical Therapy program. Students transferring from community colleges and other colleges or universities who meet the foregoing criteria are considered on the same basis as California State University, Fresno students applying for admission to the program. An applicant must meet the above criteria to be considered for conditionally classified standing in the graduate program.

Classified Graduate Standing

In addition to meeting all admission requirements listed above, the following additional criteria must be met for the applicant to be considered for classified graduate standing:

1. Completion of all (58 units) of coursework listed below with a GPA of 3.0 each semester and overall, and a **C** or better in every course.
2. Be recommended by the physical therapy faculty.

An applicant admitted with conditionally classified standing may be granted classified standing upon meeting the above requirements.

Pre-Professional prerequisites for the Master of Physical Therapy Program

Units

Natural Sciences Category 18-19
CHEM 1A or CHEM 3A; CHEM 3B;
HS 92; PHYS 2A, 2B

Biological Sciences Category	21
PHYAN 65, 140; PHTH 119, 125, 126, 127	
Behavioral Sciences Category	10
PSYCH 10; PHTH 106; PSYCH 169 or RLS 125	
Pre-Clinical Sciences Category	8
NURS 124; PHTH 105, 107	
Total	57-58

For department application or admission information, write to the following address and enclose a self-addressed, stamped, legal-size envelope:

Admissions Coordinator
Department of Physical Therapy
College of Health and Human Services
California State University, Fresno
2345 E. San Ramon Ave. M/S MH29
Fresno, CA 93740-8031

The M.P.T. program is open to all college graduates with a bachelor's degree who have met upper- and lower-division prerequisite requirements and show intellectual promise and ability to perform at a satisfactory level during their graduate studies.

Criteria for Departmental Retention and Progression

The following are criteria for retention in the MPT program and progression to the next semester in the program:

1. Maintaining a minimum 3.0 GPA each semester in the program
2. Maintaining a minimum cumulative 3.0 GPA in M.P.T. degree requirements
3. Achieving a minimum grade of *C* (or *CR*) in each PHTH course.*
4. Enrolling in and completing all required courses in sequence.

Students must carry malpractice insurance, must purchase an appropriate laboratory coat, and must provide their own transportation to hospitals and clinics for off-campus classes and clinical laboratories. Additional laboratory fees may be required. Students must also provide for all expenses while taking the post-graduate clinical internship. Expenses include student fees, housing, meals, and travel.

*Any student receiving a grade less than *C* will not be able to continue in the program, regardless of semester or overall GPA. Please note that grade substitution is not permitted at the graduate level. A student must receive a grade of *CR* in all clinical education courses (PHTH 251-257; PHTH 275). A student receiving a grade of *C* or *NC* in a PHTH course will have one opportunity to repeat the course. A second grade of less than a *C* or *NC* in a repeated PHTH course will result in disqualification from the program.

Requirements for the Master of Physical Therapy

	<i>Units</i>
Core Requirements	62
<i>(see Advising Note 1)</i>	
PHTH 206, 207, 208, 209, 217, 218, 219, 226, 227, 228, 229, 236, 237, 238, 239, 254, 255, 256, 257, 258, 259, 260, 291	
Electives	6
PHTH 240-249, 292A, 292B	
Comprehensive Examination	0
Total	68

Postgraduate Internship

Certification requirements	12
PHTH 275 <i>(see Advising Note 2)</i>	

Advising Notes

1. PHTH 256 and 257 clinical experiences and PHTH 275 postgraduate internship are conducted in a variety of clinical facilities through out the state. Students must provide for all expenses including housing, meals, and travel. These are offered *CR/NC* only.
2. PHTH 275 must be completed to be eligible to take the state examination for licensure.

Advancement to Candidacy Requirements

Students usually advance to candidacy following the completion of two full-time semesters of graduate coursework in the Master of Physical Therapy program. Prior to advancement to candidacy, students must have the following:

1. Classified graduate student standing.
2. A minimum GPA of 3.0 (overall, program, and California State University, Fresno) on all coursework completed after the date of the first course to be included in the master's degree program, with no grade below *C*.
3. Demonstrated required competency in clinical coursework (PHTH 251-257) with grade of *CR*.
4. Demonstrated graduate level writing proficiency (assessment of a portfolio of writings is used). This requirement must be met within one semester of classified graduate standing. Contact the Department of Physical Therapy for detailed requirements.
5. Approval from the faculty to take the department's comprehensive written examination with an oral defense.

A culminating experience is required of all Fresno State master's degree candidates. Students in physical therapy satisfy the require-

ment through a comprehensive written examination with an oral defense.

COURSES

Physical Therapy (PHTH)

102. Rehabilitation Professions (3)
(Same as COUN 102.) Overview of various rehabilitation professions, the development of an interdisciplinary rehabilitation service, and principles and philosophies of rehabilitation. Responsibilities, educational requirements, practice parameters, and job locations of rehabilitation professionals. Taught in the classroom in the fall semester and online in the spring semester.

105. Medical Terminology for Health Professionals (3)
Study of word parts, definitions, spelling, analysis, synthesis, and use of medical vocabulary. This course is taught in classroom sections or may be taken entirely online.

106. Patient Practitioner Interaction (3)
Prerequisites: PSYCH 169. Patient-practitioner interaction in health care, with an emphasis on the development of effective patient/therapist communication skills for a variety of health care situations, including patient education and chronic and terminal illness.

107. Health Care Issues (3)
Analysis of the health care system and its influence on access to and delivery of health care services. Special focus on needs and mechanisms for integrated service delivery for prevention and care of acute and chronic illnesses and disabilities.

119. Anatomy of the Appendicular Skeleton (3)
An in-depth study of the structure and function of the musculoskeletal system with a special emphasis on the joints of the upper and lower extremities. Includes a laboratory utilizing cadavers and prosected material to integrate muscle and tendon attachments with bony landmarks. Joint Structure and function will also be demonstrated. (2 lecture, 3 lab hours) (Instructional materials fee, \$35)

125. Anatomy of the Axial Skeleton (4)
Prerequisite: PHTH 119. Study of the structure, function and biomechanics of the neuromusculoskeletal systems with emphasis on spine, pelvis, thoracic/peritoneal, visceral and temporomandibular joint. Includes dissection lab and prosected material. (3 lecture, 3 dissection lab hours) (Instructional materials fee, \$35)

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126. Applied Pathophysiology (3)

Prerequisite: PHYAN 65. Advanced study of physiology of body systems and responses to normal aging, environmental influences, and pathological dysfunction. (Fall semester only.)

127. Neuromuscular Processes in Human Development and Aging (3)

The study of human development from birth to senescence with focus on concepts of motor and neurological development processes integral to evaluation and treatment intervention in neurological disability. (Spring semester only.)

180T. Topics in Physical Therapy (1-3; max total 12 if no topic repeated)

Prerequisite: permission of instructor. Advanced techniques in physical therapy and new trends relating to the care of patients.

190. Independent Study (1-3; max total 6)

See *Academic Placement—Independent Study*. Approved for *RP* grading.

GRADUATE COURSES

Physical Therapy (PHTH)

For more graduate course listings, please visit the Web site at <http://www-catalog.admin.csufresno.edu/current/physthercrs.html>.

206. Professional Foundations in Physical Therapy (3)

Professional behavior standards in relation to patient care interactions, relationships with colleagues and community. Introduction to current issues in physical therapy and the APTA. Legal and ethical responsibilities of the physical therapist in the delivery of health care services.

207. Foundations of Patient Assessment in Physical Therapy (3)

Selected theory and clinical application of examination, history, system review, and specific tests and measures which make up the assessment process for the patient receiving physical therapy.

208. Foundations of Clinical Management in Physical Therapy (4)

Selected theory and clinical application of essential treatment procedures and interventions utilized in physical therapy practice including physical agents, massage, therapeutic exercise, and transfer and mobility training.

209. Clinical Pathokinesiology (3)

Normal and abnormal biomechanics of the human body will be investigated with an emphasis on analyzing and synthesizing the component motion of joints of the upper and lower extremities, spine, and pelvis.

217. Orthopedic Management in Physical Therapy I (4)

Analysis of musculoskeletal disabilities with emphasis on physical assessment, methods of therapeutic intervention, clinical decision making and program planning. Selected lectures by medical practitioners on medical-surgical management of orthopedic conditions. Focus of course will be dysfunction involving the extremities.

218. Orthopedic Management in Physical Therapy II (3)

Prerequisite: PHTH 217. Analysis of musculoskeletal disabilities with emphasis on physical assessment, methods of therapeutic intervention, clinical decision making and program planning. Selected lectures by medical practitioners on medical-surgical management of orthopedic conditions. Focus of course dysfunction involving the spine and pelvic girdle.

219. Advanced Therapeutic Technology (3)

Study of work station and ergonomic analysis as related to posture and gait. The theory and application of prosthetic and orthotic devices as applied to standing, sitting, and walking.

226. Electrophysiologic Approaches to Patient Care (3)

Prerequisites: PHTH 126; PHYAN 140. Exploration of advanced theories and principles related to the clinical use of electrophysiologic modalities. Includes electroneuromuscular stimulation for motor performance, nerve function, pain management and tissue repair. (2 lecture, 3 lab hours)

227. Applied Neurosciences in Physical Therapy (4)

Advanced study in normal structure and function of the peripheral and central nervous system as a basis for understanding the clinical manifestations seen in neurological disorders including how a physical therapist would manage these manifestations.

228. Management of Neurological Disorders in Physical Therapy I (3)

Advanced evaluation and treatment approaches to neurological disabilities in adults with emphasis on therapeutic intervention, program planning, and outcome measurements for the patient with neurological problems such as balance disorders, stroke, and Parkinson's disease.

229. Management of Neurological Disorders in Physical Therapy II (3)

Advanced evaluation and treatment approaches to neurological disabilities in adults with emphasis on therapeutic intervention, program planning, and outcome measurements for the patient with neurological problems such as spinal cord injury, multiple sclerosis, and traumatic head injury.

236. Physical Therapy Management of Body Systems (3)

Evaluation and therapeutic intervention in the clinical management of normal and pathological conditions of the cardiovascular, pulmonary, endocrine, and integumentary systems. A focus on the development of advanced knowledge and skills in patient evaluation, program planning, and treatment procedures.

237. Physical Therapy Management in Pediatrics (3)

Prerequisites: PHTH 207, 208. Advanced study of diagnosis and physical therapy problems found in pediatrics. Evaluation and intervention principles are used to discuss and explore clinical manifestations associated with diseases and functional impairments. Emphasis will be placed on therapeutic intervention and program planning.

238. Physical Therapy Management in Geriatrics (2)

A synthesis of biology of aging with common orthopedic and neurological problems special to the older patient. This course emphasizes analysis of clinical problems and issues facing the physical therapist in utilizing functional testing and community resources with the elderly.

239. Advanced Differential Diagnosis in Physical Therapy (3)

Study of functional profiles of clients with emphasis on signs and symptoms associated with musculoskeletal, cardiopulmonary, peripheral vascular, and neurological diagnosis. Emphasis on methods to determine the most appropriate intervention strategy for each patient or client through the diagnostic process.

- 240. Advances in Orthopedic Physical Therapy I (2)**
Prerequisite: PHTH 217, 218 or permission of instructor. Exploration of treatment of orthopedic problems.
- 241. Advances in Physical Therapy II (2)**
Prerequisite: PHTH 217, 218 or permission of instructor. A continuation of Advances in Orthopedic Physical Therapy I.
- 242. Advanced Clinical Anatomy I (2)**
Prerequisite: PHTH 115, 125 or permission of instructor. Exploration of clinical application of anatomical structures of joints.
- 243. Advanced Clinical Anatomy II (2)**
Prerequisite: PHTH 242 or permission of instructor. A continuation of Advanced Clinical Anatomy I.
- 244. Advances in Management of the Aging Population (2)**
Prerequisite: PHTH 127 or permission of instructor. Exploration of special approaches and considerations of intervention of conditions of aging.
- 245. Advances in Management of the Neurological Patient (2)**
Prerequisite: PHTH 227, 228 or permission of instructor. Exploration of advanced multisystem treatment approaches in neuro-rehabilitation.
- 246. Management Strategies for Independent Practice (2)**
Prerequisite: permission of instructor. Exploration of strategies for developing and maintaining a physical therapy service in an independent environment.
- 247. Sports Injuries (2)**
Exploration in advances in management of sports injuries.
- 248. Advances in Cardiac Rehabilitation (2)**
Prerequisite: PHTH 236 or permission of instructor. Exploration of the components of implementing and maintaining multilevels of cardiac rehabilitation and the management of patients with cardiac disease.
- 249. Contemporary Issues in Delivery of Physical Therapy Services (2)**
Prerequisite: permission of instructor. Exploration of emerging trends and issues in contemporary physical therapy practice.
- 254. Clinical Learning I (1)**
Prerequisite: Satisfactory completion of academic courses to date. This class is taught in an experimental model exposing students to clinical decision analysis by exposing them to the Gait, Balance, and Mobil-

ity Clinic. Students primarily observe evaluation and treatment of clients.

- 255. Clinical Learning II (2)**
Prerequisite: PHTH 254; satisfactory completion of academic courses to date. Using an experimental model for clinical decision analysis, this class requires the student to consider the appropriateness of various evaluation and treatment techniques by evaluating and treating clients enrolled in "Fall Prevention and Balance Disorder" class.
- 256. Clinical Experience I (2)**
Prerequisite: satisfactory completion of academic courses to date. The student will be guided in the application of academic knowledge to patient care during this clinic externship. Comprehensive examination, evaluation, and intervention will be used to manage the physical therapy client. Approved for *RP* grading and *CR/NC* grading only.

257. Clinical Experience II (2)
Prerequisite: PHTH 256. This externship provides guidance to the student in applying academic knowledge in a clinical setting. Students will have the opportunity to complete a comprehensive examination, evaluation and treatment intervention, and implement complex decision making analysis in physical therapy patient management. Approved for *RP* grading and *CR/NC* grading only.

258. Integrated Clinical Management I (2)
Prerequisite: PHTH 256; successful completion of the first year of the Master of Physical Therapy Program. Application of evidence-based practice principles in physical therapy. Integration of diagnostic findings, patient history and resource constraints to establish a physical therapy plan of care. Emphasis on appropriate communication and case management.

259. Integrated Clinical Management II (2)
Prerequisite: PHTH 256, 258; successful completion of the first year of the Master of Physical Therapy Program. Integration of diagnostic findings, patient history, and resource constraints to establish a physical therapy plan of care. Emphasis on management of patients with multi-system involvement and justification of service delivery in regard to outcomes and resource limitations.

260. Administration of Physical Therapy Services (2)
Prerequisite: PHTH 206. Application of administration and organization of a physical therapy service, including supervision issues, fiscal considerations, marketing and public relations, outcomes management, utilization and quality management.

275. Postgraduate Clinical Internship (12)
Prerequisite: PHTH 259. Final experience for majors. The internship is 18 weeks of clinical experience at selected facilities throughout the state. Certification of internship completion is required before the graduate is eligible to take the state examination for licensure. *CR/NC* grading only.

290. Independent Study (1)
Supervised guidance for students who wish to do additional research. Approved for *RP* grading.

291. Research Methods (3)
Promotes skills in application of research design and critical reading, based on principles of evidence-based practice. Emphasis will be placed on evaluation of published research and clinical applications. Descriptive, correlational, experimental and single subject designs will be discussed.

292A. Advanced Physical Therapy Research: Problem Formulation and Method (3)
Explores advanced topics in physical therapy research including conceptualization, operation utilization, design and sampling strategies. It allows students to prepare a proposal for an independently pursued, empirically based research project.

292B. Advanced Physical Therapy Research: Data Collection and Analysis (3)
Prerequisite: PHTH 292A. Examines advanced strategies for physical therapy research data collection and analysis. Students are able to independently collect data, analyze it and report findings from a research project.

IN-SERVICE COURSE

(See *Course Numbering System*.)

Physical Therapy (PHTH)

302T. Topics in Physical Therapy (1-6; repeatable with different topics)
Selected topics in physical therapy for practicing clinicians in the health fields.