## USC Independent Health Professions



The 2002 America's Best Graduate Schools issue of U.S. News and World Report ranks the USC Department of Occupational Science and Occupational Therapy number one. During their studies, students work closely with patients under the guidance of faculty.

he USC Departments of Biokinesiology and Physical Therapy and Occupational Science and Occupational Therapy are administered independently by the Office of the Vice President for Health Affairs. Both of these departments offers outstanding health professional education at either the graduate or undergraduate levels.

The Department of Biokinesiology and Physical Therapy was established in 1944. For those wishing to enter the profession, the department offers the Doctor of Physical Therapy degree. For persons who are already practicing physical therapists, the department offers a Master of Science program. In addition, the department offers the nation's oldest Ph.D. degree program in Physical Therapy, now a Ph.D. in Biokinesiology. Experienced clinicians with a master's degree in physical therapy may be eligible to apply for the Doctoral of Physical Therapy in an Advanced Standing program. Clinicians seeking specialization in a specific area of practice may enter the Certificate Clinical Residence Program. The department is headquartered on the Health Sciences campus; all degree programs are offered through the Graduate School.

The Department of Occupational Science and Occupational Therapy opened in 1942 and is head-quartered on the Health Sciences campus; more than 50 percent of the recipients of the highest academic awards given by the American Occupational Therapy Association have been USC alumni. The department's highly regarded Bachelor of Science degree program is offered through the College of Letters, Arts and Sciences. The department offers three degrees in conjunction with the Graduate School: the nation's oldest degree programs leading to the Master of Arts for registered occupational therapists or for persons with degrees in related fields, the world's first Ph.D. in Occupational Science and a new professional Doctor of Occupational Therapy.

## **Biokinesiology and Physical Therapy**

Health Sciences Campus Center for the Health Professions 1540 E. Alcazar St., CHP 155 Los Angeles, CA 90089-9006 (323) 442-2900 FAX: (323) 442-1515

#### **Faculty**

Chair: James Gordon, Ed.D., P.T.

Associate Chair: Sandra Howell, Ph.D., P.T.

Assistant Chair: Christopher Powers, Ph.D., PT.

Associate Professors: Lucinda L. Baker, Ph.D., P.T.; Nina S. Bradley, Ph.D., P.T.; James Gordon, Ed.D., P.T.; Sandra Howell, Ph.D., P.T.; Jack E. Turman, Jr., Ph.D., P.T.; Carolee J. Winstein, Ph.D., P.T.; Robert Wiswell, Ph.D.

Assistant Professors: Christopher Powers, Ph.D., P.T.; George J. Salem, Ph.D.

Associate Professors of Clinical Physical Therapy: Kornelia Kulig, Ph.D., P.T.; Robert F. Landel, D.P.T.

Assistant Professors of Clinical Physical Therapy: Cindy Bailey, M.S., P.T.; Jody Cormack, D.P.T.; Sharon DeMuth, D.P.T.; Yogi Matharu, D.P.T.; Michael O'Donnell, D.P.T.; Cheryl Resnik, D.P.T.; Katherine Sullivan, Ph.D., P.T.

Assistant Professor of Research Physical Therapy: Beth Fisher, Ph.D., P.T.

Instructors of Clinical Physical Therapy: Tina Alva, M.P.T.; Wendy Burke, M.S., P.T.; Julia Burlette, M.P.T.; Ndidiamaka Dillibe, D.P.T.; Jacquelyn Dylla, D.P.T.; Alisa Eischen, M.P.T.; Gretchin Hernandez, M.P.T.; Dianne Jones, M.Ed., P.T.; Yasuyuki Kasayama, D.P.T.; Jose Raul Lona, D.P.T.; Jennifer Lundberg, M.P.T.; Jeffrey Rodrigues, D.P.T.;

Chris Sebelski, D.P.T.; Diana Turley, D.P.T.; Teresa Wong, M.S., P.T.

Adjunct Associate Professors: Hugh G. Watts, M.D.; Rizkalla Zakhary, Ph.D.

Adjunct Assistant Professors of Clinical Physical Therapy: Dale Avers, Ph.D., P.T.; Kyle F. Baldwin, D.P.T.; Lily Cabellon, M.D.; James Dagostino, D.P.T.; Daniel Farwell, D.P.T.; Paul D. Gaspar, D.P.T.; H. Paul Gudmundsson, B.S.; Larry Ho, D.P.T.; Sally Ho, D.P.T.; Janet Konecne, D.P.T.; Carlos A. Lavayen, D.P.T.; Rebecca Lewthwaite, Ph.D.; Christie MacDonald, D.P.T.; John Meyer, D.P.T.; John Montgomerie, M.D.; Susan Mais Requejo, D.P.T.; Stephen Reischl, D.P.T.; Marcie Rhee, D.P.T.; E. Todd Schroeder, Ph.D.; Carin Shuler, D.P.T.; Elizabeth Souza, D.P.T.; Gary Souza, D.P.T.

Adjunct Instructors of Clinical Physical Therapy: Jesus Dominguez, M.P.T.; Reiko Kurihara, M.P.T.; Catherine Sugden, P.T.; Jorge Orozco, P.T.; Walter Weiss, M.P.T.; Arlene Yang, M.S., P.T.

Clinical Assistant Professors of Physical Therapy: Jerry Baranick, D.P.T.; Kirk Bentzen, D.P.T.; Sharla Bohman, P.T.; Linda deHass, M.P.T., OCS; Brett Eirich, P.T.; Charles Fehrenbach, P.T., ATC; Eileen Fowler, Ph.D., P.T.; Kim R. Gottshall, Ph.D., P.T.; Sharon Grady, P.T., M.S., PCS; Rebecca Hally, D.P.T.; Patricia A Hokama, M.S., P.T.; Joan Jacobs, P.T., PCS; Rebecca W. Kern, P.T.; Lorraine Kimura, P.T.; D. Keith Kleven, M.S., P.T., ATC; Gary P. Konecne, M.P.T., ATC; Bryan T. Lee, D.P.T.; Marsha Lovett, M.S., P.T.; Traci Martinez, P.T.; Dawn McNulty, M.P.T.; Lisa Carroll Mena, P.T.; Kenneth Mengel, M.P.T., OCS; Harold E. Nelson, Jr., M.S., P.T.; Jenevieve Neros, M.P.T., CWS; Adrienne R. Parry, P.T.; Thomas T. Payne, III, M.A., P.T.; Cuong Pho, D.P.T., OCS, ATC; David V. Powers, M.A., M.B.A., P.T.; Jennifer L. Richards, M.P.T.; Scott E. Ruther, M.S., P.T.; Sherif Salaway, M.P.T.; Ruben Salinas, P.T., D.P.T.,

OCS; Victor Santos, P.T.; Joel Z. Scherr, P.T., OCS; Barry Shafer, M.P.T., ATC; Catherine M. Smith, P.T.; Derrick Sueki, D.P.T.; Leslie Torburn, M.S., P.T.; M. Beverly Toyama, P.T.; Ann T. Vivian, M.P.T., NCS; George G. Wallace, Jr., P.T., M.S., OCS; Aileen Walton, P.T.; Joseph P. Yarmolovich, P.T.

Clinical Instructors of Physical Therapy: Brett Bloom, D.P.T.; Douglas Free, D.P.T.; Suzanne Freeman, M.P.T., OCS; Sara Grannis, D.P.T., ATC; David T. Hayes, P.T.; Michael S. Ko, D.P.T., ATC; Jeffrey Lau, D.P.T.; David Lipetz, M.S., P.T., OCS, Cert. MDT; Susan Reischl, P.T., OCS; Lisa Shepard, D.P.T.; Cheryl Tibbetts, M.P.T., OCS; Julie Tilson, D.P.T.; Brian Wall, D.P.T.; Bernardina G. Wilcox, P.T.; OCS, MOMT

Emeritus Professors: Helen J. Hislop, Ph.D., Sc.D., FAPTA; Jacquelin Perry, M.D. (Orthopedics)

Emeritus Associate Professor: Lenore M. Krusell, M.A., P.T.

#### **Programs**

The Department of Biokinesiology and Physical Therapy offers curricula leading to the master's degree and three doctoral degrees. The entry-level professional program is for graduate students in majors other than physical therapy and leads to a Doctor of Physical Therapy degree. For physical therapy clinicians who wish to earn the D.P.T. degree there is an advanced standing program; credits from the M.S. in physical therapy or the M.P.T. may become the basis for advanced standing. The graduate curricula for the Master of Science and Doctor of Philosophy degrees are for persons who already are physical therapists; admission to the M.S. and Ph.D. programs also is open to scientists who are not physical therapists.

## Master of Science

Graduate study for the Master of Science in Biokinesiology is open to individuals who have a bachelor's degree and who have a strong interest in movement sciences.

#### **Admission Requirements**

Admission requirements include a superior grade point average in cumulative undergraduate and graduate course work (if applicable). Applicants should score at least 600 in each area of the Graduate Record Examinations. Applicants are to provide the department with three letters of recommendation. The faculty may request a personal interview before making a decision on admission. Admission will be considered for fall, spring or summer terms but sequences of courses make fall the preferred starting time. Deadline for application is four months prior to the proposed starting date. All applicants should contact the Department of Biokinesiology and Physical Therapy for advisement.

#### **Prerequisites**

The prerequisite for applicants to the Master of Science program in biokinesiology is either: (a) a bachelor's degree or higher with a science major or equivalent; or (b) a bachelor's or master's degree in physical therapy with appropriate basic science content. Courses completed at the time of application must include work (with appropriate laboratory study) in chemistry, mathematics, physics and biology. Highly recommended is course work in anatomy, physiology, calculus, histology, kinesiology, trigonometry, analytical

geometry, exercise physiology and biochemistry. Applicants with no background in cellular or molecular biology may be required to take PT 509 in the entry-level D.P.T. program. Candidates should have some degree of computer literacy. International applicants will be considered on a special evaluation of credentials.

Students deficient in certain prerequisites may be admitted subject to completion of requirements within two years after admission. An additional year may be granted upon review of the student's program by a faculty committee. Work in any prerequisite subjects will not be part of the required units for the Master of Science.

#### **Degree Requirements**

Completion of the degree requires satisfactory completion of a minimum of 32 credits of course work at the 500 level or above, a research project (BKN 559 and 590), and a comprehensive examination administered with the chair of the Biokinesiology Committee acting as the examination advisor.

REQUIRED COURSES	U	NITS
BKN 550	Neurobehavioral Basis of	
	Movement	4
BKN 551	Musculoskeletal and	
	Biomechanical Basis of	
	Movement	4
BKN 552	Physiological Basis of	
	Voluntary Movement	4

BKN 559	Readings in Biokinesiology 4
BKN 590	Directed Research 1-12
PM 510L	Principles of Biostatistics 4

Students must complete the three biokinesiology core courses (BKN 550, BKN 551, BKN 552) before sitting for their comprehensive examination. Substituting a course for one of the core courses may be allowed after receiving approval from the Biokinesiology Committee prior to the beginning of the course.

In order to fulfill the research project requirement, students must do the following:

- 1. Select a research professor (from the department) whose work interests them.
- 2. After receiving the professor's approval, sign up for BKN 559 (4 units) and complete a semester reading the literature pertinent to the professor's work.
- 3. The following semester, sign up for BKN 590 (4 units) and participate in an ongoing research project which is being conducted by the professor. The research paper must be completed within the semester for which BKN 590 units are being given.

See the Doctor of Philosophy in Biokinesiology section for a list of courses available to M.S. students.

## Doctor of Physical Therapy

#### Post Professional Doctor of Physical Therapy Program

Applicants must be experienced physical therapy clinicians licensed to practice in the United States. Alternatively, foreign trained therapists must be graduates of institutions recognized by the American Physical Therapy Association. Applicants must also hold a master's degree in physical therapy or a field related to physical therapy practice. Generally, a minimum grade point average of 3.0 on a 4.0 scale as well as a minimum score of 500 on each of the three components of the Graduate Record Examinations are required. The degree requirement includes successful completion of 30 units as described in the following three sections:

REQUIRED COURSES		UNITS
PT 573	Physical Examination and Differential Diag- nosis in Patients with	
	Medical Disorders	2
PT 585	Physical Examination	
	and Differential Diag-	
	nosis in Patients with	
	Neurological Disorders	2
PT 591	Physical Examination	
	and Differential Diag-	
	nosis in Patients with	
	Orthopedic Disorders	2
PT 605	Orthopedic Radiology	2
PT 607	Clinical Scanning	2
PT 608	Pharmacotherapeutics	2

EACH CATEGORY	) UN	ITS
Anatomy		
BKN 551	Musculoskeletal and	
	Biomechanical Basis of	
	Movement	4
BKN 581	Arthrology	2
BKN 667	Scientific Basis of Skeletal	
	Adaptation	3
PT 514L	Musculoskeletal Anatomy	4
PT 534	Neuroanatomy	3
PT 554	Analytical Anatomy	3

Neurobiology		
BKN 553	Gait Analysis,	
	Observational	3
BKN 565	Neurophysiology of	
	Motion	4
BKN 587ab	Physiological Correlates	
	of Therapeutic Exercise	4-4
BKN 593	Behavioral Basis of Motor	
	Control and Learning	3
PT 509	Cellular and Systems	
	Physiology	3
PT 546	Neuropathology	3
PT 549	Clinical Exercise	
	Physiology	4
Exercise Physiology		
BKN 587ab	Physiological Correlates	
	of Therapeutic Exercise	4-4
PT 509	Cellular and Systems	
	Physiology	3
PT 549	Clinical Exercise	
	Physiology	4

#### Capstone Project

This required project provides the student with the opportunity to synthesize the learning experiences of the D.P.T. program. It can take the form of a case study, a learning module for students or patients, a business plan for a unique form of health care delivery, or some other innovative concept. Work towards the completion of the project is done under the guidance of a single faculty member or a committee, depending on the magnitude and scope of the project. The primary faculty advisor will determine the unit value of the project.

A clinical residency is also available as part of the post-professional D.P.T. program.

#### Certificate in Orthopedic Physical Therapy Certificate in Neurologic Physical Therapy Clinical Residency Programs

These programs are directed at practicing clinicians who seek post-professional clinical residency education in orthopedic or neurologic physical therapy and wish to obtain an academic credential for its completion.

#### Admission Requirements, Prerequisites and Degree Requirements

Admission requirements such as grade point average, GRE scores and P.T. licensure are the same as those for the post-professional D.P.T. In addition to the above listed requirements, experience in orthopedic physical therapy as evidenced by the years in practice and post-graduate course work taken will be assessed in the applicant's portfolio. The faculty may request a personal interview. Admission will be considered for fall semester only. Deadline for application is four months prior to the proposed starting date. All applicants should contact the Department of Biokinesiology and Physical Therapy for advisement. Completion of the certificate requires satisfactory completion of a minimum of 15 units.

REQUIRED COURS	ES FOR CERTIFICATE IN	
ORTHOPEDIC PHYS	SICAL THERAPY UN	ITS
PT 595abcd	Residency in Advanced	
	Clinical Physical	
	Therapy 1-4 ea	.ch
PT 622	Advanced Management	
	of Spinal Disorders	3
PT 623	Advanced Management	
	of Extremity Disorders	3
REQUIRED COURS	ES FOR CERTIFICATE IN	
NEUROLOGIC PHY	SICAL THERAPY UN	ITS
PT 595abcd	Residency in Advanced	
	Clinical Physical	
	Therapy 1-4 ea	ch
PT 624abL	Neurological Differential	
	Diagnosis and Therapeutic	

## Doctor of Physical Therapy and Master of Public Health

Interventions I

The Post Professional Doctor of Physical Therapy (D.P.T.) and the Master of Public (M.P.H.) dual degree program offers the opportunity for physical therapy clinicians to pursue a doctoral-level education in combination with an integrated approach to health care. The program spans four years. Students begin the first one to two years completing M.P.H. core and elective course work in the Department of Preventive Medicine. The remaining years are devoted to program requirements in physical therapy. At the conclusion of the program, students will have completed 68 units of course work, including a public health practicum.

## Professional Entry-Level Doctor of Physical Therapy Program

This program, for persons who are not physical therapists, comprises six semesters and two summers for completion of the required 117-121 units. All courses are in sequence and only in rare circumstances is the sequence altered.

#### **Admission Requirements (Entry-Level)**

Applicants are required to complete a baccalaureate degree (a minimum of four years or 120 semester hours of academic work) at an accredited college or university prior to matriculation. Prerequisite course work must include: four courses in the biological sciences (including human anatomy, human physiology and either cell or molecular biology); one year of college physics; one year of college chemistry; one semester of college mathematics; two courses in psychology; one course in composition and writing; and one course in either literature or history. Human anatomy, human physiology, physics and chemistry must include laboratories. The following courses are highly recommended: biochemistry, calculus, kinesiology, exercise physiology, neuroscience, genetics and a cross-cultural course in sociology. Applicants should be computer literate.

Students from foreign countries must have completed one year of study in the United States prior to application. Credits from foreign institutions must be approved by the USC Office of Admission.

Graduate Record Examinations (GRE)

The CDE is required of all applicant

The GRE is required of all applicants. In general, minimum scores of 500 are required on each of the general test measures of verbal, quantitative and analytical ability.

#### **Applications**

3-3

Applications are available in September for the class entering in September of the following year. The deadline for receipt of applications is December 1 of each year. Only one class is admitted each year.

The Admissions Committee reviews all information submitted. Applicants may be requested to appear for a personal interview. It is highly recommended that all applicants make an appointment to visit the department's office located on the Health Sciences campus and talk with students and members of the faculty.

#### Notice of Acceptance

Notice of acceptance will be sent to successful candidates no earlier than late January and continually thereafter until the class is filled. In no case will an acceptance be offered earlier than one year before anticipated enrollment.

Candidates should reply to an offer of acceptance within three weeks enclosing a \$500 deposit (nonrefundable) which is credited to tuition at the time of registration. A letter of withdrawal is required if applicants wish to relinquish their place in the class; release is granted automatically upon receipt of the letter.

#### **Degree Requirements (Entry-Level)**

The USC Graduate School awards the D.P.T. to enrolled students who have completed satisfactorily the three-year curriculum of 117-121 credits (depending on electives chosen). The minimum number of credits required for graduation is 117. The minimum GPA required for graduation is 2.75. Clinical experience (clerkship) is part of the curriculum during all three years.

The Department of Biokinesiology and Physical Therapy uses a system of student evaluation and grading that is designed to encourage self-reliance, to stimulate the student's independent quest for knowledge and to promote excellence in clinical and academic achievement.

Faculty of the program are responsible for establishing evaluation criteria appropriate to the objectives of each course and for specifying the manner in which evaluative information is to be gathered. For clinical evaluation, descriptive comments based on the student's performance are submitted by faculty and clinical instructors to the student's permanent file.

REQUIRED COURSES	U	NITS
PT 507	Professional Practice:	
	Therapist Perspective	2
PT 509	Cellular and Systems	
	Physiology	3
PT 514L	Musculoskeletal Anatomy	4
PT 516	Principles of Disease	2
PT 521L	Basics of Patient	
	Management	4
PT 529	Life Span Motor Control	3
PT 530	Therapeutic Exercise	2
PT 534L	Neuroanatomy	3
PT 536	Pathology of	
	Cardiopulmonary	
	Disease and General	
	Medical Conditions	4
PT 539	Clinical Pharmacology	1
PT 546	Neuropathology	3
PT 547	Professional Practice:	
	System Perspective	2
PT 549L	Clinical Exercise	
	Physiology	4
PT 551L	Therapeutic Application	
	of Physical Agents	2
PT 554L	Analytical Anatomy	3
PT 557	Professional Practice:	
	Patient Perspective	2
PT 566	Disorders of the	
	Musculoskeletal System	3
PT 569	Fundamentals of	-
	Neuroscience	4
PT 571L	Clinical Management of	
	Cardiopulmonary	
	Dysfunction	3
PT 574	Clinical Biomechanics	3
PT 581L	Clinical Management	J
	of the Patient with	
	Neurological	
	Dysfunction	5
		0

PT 582	Mechanics of	
	Human Gait	2
PT 583L	Clinical	
	Electrophysiology	3
PT 600abcdez	Clinical	
	Clerkship 1-3-1-1-	3-0
PT 606	Clinical Imaging	3
PT 621L	Clinical Management	
	of the Patient with	
	Musculoskeletal	
	Dysfunction	5
PT 626	Management of	
	Geriatric Conditions, or	
PT 627	Management of the	
	Pediatric Patient	1-1
PT 636ab	Grand Rounds	1-1
PT 642abc	Evidence Based	
	Practice 2-2	2-2
PT 646L	Pathokinesiology	
	of Gait	3
PT 650	Differential Diagnosis in	
	Physical Therapy	1
PT 681	Physical Therapy	
	Management of the	
	Orthopedic Outpatient	3
PT 682	Physical Therapy	
	Management of the	
	Orthopedic Inpatient	5
PT 691	Physical Therapy	
	Management of the	
	Neurologic Outpatient	3
PT 692	Physical Therapy	
	Management of the	
	Neurologic Inpatient	5
PT 693	Physical Therapy	
	Management of the Genera	al
	Medicine Inpatient	5
Doctoral researc	h is also available as an	

Doctoral research is also available as an elective.

#### Third Year Clinical Experience

The last year of the three-year program will largely be devoted to clinical assignments in out-patient and in-patient facilities. This continuum of clinical rotations will be designed for each individual student.

REQUIRED CLINICAL I	ROTATIONS	UNITS
PT 681	Physical Therapy	
	Management of the	
	Orthopedic Outpatient	3
PT 682	Physical Therapy	
	Management of the	
	Orthopedic Inpatient	5
PT 691	Physical Therapy	
	Management of the	
	Neurologic Outpatient	3
PT 692	Physical Therapy	
110/2	Management of the	
	Neurologic Inpatient	5
PT 693	Physical Therapy	3
1 1 0/3	Management of the Ger	eral
	Medicine Inpatient	5
	Wedienie inpatient	3
REQUIRED COURSES		UNITS
PT 626	Management of	
	Geriatric Conditions, or	
PT 627	Management of the	
	Pediatric Patient	3
PT 636ab	Grand Rounds	1-1
PT 646L	Pathokinesiology	
	of Gait	3
ELECTIVE COURSES*		UNITS
PT 612L	Physical Therapy	
1 1 01212	Management of Spinal	
	Disorders	2
PT 613L	Physical Therapy	4
1 1 01312	Management of the Foo	.+
	and Lower Quarter	. 2
PT 614L	Evaluation and Manager	
P 1 014L	U	
PT 615	of Hand Dysfunction Management of the	2
P 1 015		2
DVE (40I	Complicated Patient	2
PT 618L	Seminar in Advanced	
DVE (101	Neurological Rehabilitat	
PT 619L	Clinical Electrophysiolo	gy 2
PT 654	Physical Therapy	
	Interventions in Pediatr	ics 2

\*Students must take one elective in the third year, but may opt to take 1-2 additional electives.

## Doctor of Philosophy in Biokinesiology

The graduate program leading to the Doctor of Philosophy in Biokinesiology is designed to prepare candidates for research and teaching at the university level. Actual programs of study will be designed with a degree of flexibility directed toward individual students who seek to become independent scholars.

#### **Admission Requirements**

Applicants must meet all general admission requirements of the university. Admission requirements include a superior grade point average in cumulative undergraduate and graduate course work (if applicable). In addition, applicants should score at least 600 in each area of the Graduate Record Examinations (GRE) and have some research experience. Students admitted for the Master of Science degree are not automatically admitted to the Doctor of Philosophy program. The Master of Science is not required as a prerequisite to the Ph.D. but may be advised.

Applicants must have a personal interview with the program faculty. A student can be considered for admission only when a member of the full-time Ph.D. faculty has agreed to serve as the student's Ph.D. advisor. Three letters of recommendation and duplicate transcripts must be sent to the department for preliminary evaluation, although final acceptance is based upon the official USC application procedure.

#### Prerequisites (Ph.D. Program)

The prerequisite for applicants to the Ph.D. program in biokinesiology is either: (a) a bachelor's degree or higher with a science major or equivalent; or (b) a bachelor's or master's degree in physical therapy with appropriate basic science content. Courses completed at the time of application must include work (with appropriate laboratory study) in chemistry, mathematics, physics and biology. Highly recommended is course work in anatomy, physiology, histology, cell biology, exercise physiology, kinesiology, biochemistry, trigonometry, analytical geometry and calculus.

Candidates should be computer literate. International applicants will be considered on a special evaluation of credentials.

Students deficient in certain prerequisites may be admitted subject to completion of requirements within two years after admission. An additional year may be granted upon review of the student's program by a faculty committee. Work in any prerequisite subject will not be part of the required 60 units for the Doctor of Philosophy.

#### **Screening Procedure**

A screening procedure will be offered twice each year for qualified students. It must be taken prior to the completion of 24 units at the 500-level or higher. The screening procedure will cover topics in biokinesiology related to the student's course work and will be prepared, administered and evaluated by the research faculty of the department and faculty in related departments of cognate study. Passing the procedure is a prerequisite for continuation in the Ph.D. program.

#### **Course Requirements**

A minimum of 60 units is required for the Doctor of Philosophy degree.

UNITS
behavioral Basis of
ment 4
ıloskeletal and
echanical Basis of
ment 4
ological Basis of
tary Movement 4
rch 1-12
ral
rtation 2-2-2-0

Ph.D. students must complete three core courses (BKN 550, BKN 551, BKN 552) before participating in the screening procedure. Substituting a course for one of the core courses may be allowed after receiving approval from the Biokinesiology Committee prior to the beginning of the course.

Other course requirements (to complete 60 units) will vary according to the specific needs of each student. Course work other than departmental offerings is encouraged and may be required by the student's guidance committee.

#### **COURSES AVAILABLE FOR**

M.S./PH.D. STUDEN	rs UNITS
BKN 553	Gait Analysis,
	Observational 2
BKN 559	Readings in Patho-
	kinesiology 1-4, max 8
BKN 563	Biomechanics 2
BKN 565	Neurophysiology
	of Motion 4
BKN 566	Neurobiology of
	Locomotion 2
BKN 568ab	Objective Measurement
	of Physical Performance 3-3
BKN 573ab	Advanced Dissection
	Anatomy 2-2
BKN 576	Seminar 1, max 2
BKN 587ab	Physiological
	Correlates of
	Therapeutic Exercise 4-4
BKN 590	Directed Research 1-12
BKN 593	Behavioral Basis of
	Motor Control and
	Learning 3
BKN 594abz	Master's Thesis 2-2-0
BKN 599	Special Topics 2-4, max 8
BKN 653	Gait Analysis,
	Instrumented 4
BKN 656ab	Recent Advances in
	Biokinesiology 2-2
BKN 672	Advanced Independent
	Study in
	Biokinesiology 1-4, max 8
BKN 790	Research 1-12
BKN 794abcdz	Doctoral
	Dissertation 2-2-2-2-0
PT 570	Technology in
	Teaching and Use
	of Multimedia 1-5
PT 595abcd	Residency in Advanced
	Clinical Physical
	Therapy 3-3-3-3
	T)

#### Foreign Language Requirement

There is no foreign language requirement; instead, a biometry sequence is required (PM 510L, PM 511abL) plus additional research methods or computer science courses (PM 513 or BME 523 or equivalent).

#### Guidance Committee

Upon successful completion of the screening examination the student and the major advisor will select a guidance committee for continuing course work and independent study. The guidance committee comprises five members; three full-time Ph.D. faculty from the Department of Biokinesiology and Physical Therapy, one of whom serves as the committee chair, and two faculty members outside the department.

The guidance committee will recommend course work, independent study and readings in the major and cognate areas.

#### Qualifying Examination

The Ph.D. qualifying examination is offered during the fall or spring semesters. The qualifying examination concentrates on the student's ability to demonstrate knowledge in the major academic area chosen and its relation to other areas of study offered in the department. The qualifying examination has both written and oral components. A student failing any part of the examination may be allowed one additional opportunity to pass that portion at the discretion of the guidance committee, within the regulations of the Graduate School governing the repetition of qualifying examinations.

#### Dissertation Committee

After the qualifying examination has been passed and a dissertation topic approved, the guidance committee shall be known as the dissertation committee and may be reduced to three members upon unanimous recommendation to the dean of graduate studies. One of the three members must be from outside the major department. The dissertation and the defense or final oral must have the unanimous approval of the dissertation committee.

#### Dissertation and Oral Defense

An acceptable dissertation based on original investigation is required. The dissertation must show technical mastery of a special field, capacity for independent research and scholarly ability.

The chair of the dissertation committee will be the principal research advisor. The dissertation should be completed within two years of the date of approval of the proposal.

## Doctor of Philosophy in Biokinesiology and Physical Therapy

The graduate program leading to the Doctor of Philosophy in Biokinesiology and Physical Therapy offers an opportunity for highly qualified students to prepare for careers in academic health care. The curriculum is designed for individuals who envision a career that combines training for physical therapy practice and scholarly research.

#### **Admission Requirements**

Applicants must have earned a bachelor's degree with a superior grade point average as well as Graduate Record Examinations scores. A personal interview with program faculty is required. Prerequisite course work must include: four courses in the biological sciences with labs (including human anatomy, human physiology and cell or molecular biology); one year of college physics with lab; one year of college chemistry with lab; one semester of college mathematics; two courses in psychology; one course in composition and writing; one course in literature or history. Courses that are highly recommended include: biochemistry, calculus, kinesiology, exercise physiology, neuroscience, genetics and a cross-cultural course in sociology.

Application for admission to the Department of Biokinesiology and Physical Therapy requires submission of two sets of materials: special departmental application and university application forms. Students are admitted for study in the Ph.D. in Biokinesiology and Physical Therapy program beginning in the fall semester of each academic year. Both sets of applications must be submitted by December 1 of the previous year. At the time of admission to the program, the student must identify a faculty member who will serve as an advisor throughout every phase of study.

#### **Degree Requirements**

This degree is under the jurisdiction of the Graduate School. Refer to the Requirements for Graduation section (page 62) and the Graduate School section of this catalogue (page 591) for general regulations.

YEARS 1, 2 - REQUI	RED COURSES	JNITS
PT 507	Professional Practice:	
	Therapist Perspective	2
PT 509	Cellular and Systems	
	Physiology	3
PT 514L	Musculoskeletal Anatomy	
PT 516	Principles of Disease	2
PT 521L	Basics of Patient	
	Management	4
PT 529	Life Span Motor Control	3
PT 534L	Neuroanatomy	3
PT 536	Pathology of	
	Cardiopulmonary Disease	
	and General Medical	
	Conditions	4
PT 539	Clinical Pharmacology	1
PT 546	Neuropathology	3
PT 547	Professional Practice:	Ü
11317	System Perspective	2
PT 549L	Clinical Exercise	-
113171	Physiology	4
PT 551L	Therapeutic Applications	
1 1 33112	of Physical Agents	2
PT 554L	Analytical Anatomy	3
PT 557	Professional Practice:	5
1 1 337	Patient Perspective	2
PT 566	Disorders of the	4
1 1 300	Musculoskeletal System	3
PT 569	Fundamentals of	3
1 1 309	Neuroscience	4
PT 571L	Clinical Management of	7
F I 3/1L	Cardiopulmonary	
	Dysfunction	3
РТ 574	Clinical Biomechanics	3
PT 581L	Clinical Management of the	
r i Joil	Patient with Neurological	ic
	Dysfunction	5
PT 582	Mechanics of Human Gair	
PT 584 PT 583L	Clinical Electrophysiology	
PT 600abcdez		
PT 600abcdez	Clinical Clerkship 1-3-1-1 Clinical Management of	1-3-0
F I 041L	the Patient with	
	Musculoskeletal	
		_
DT 5101	Dysfunction	5 4
PT 510L PT 511aL	Principles of Biostatistics	4
r i 511aL	Data Analysis	4

YEARS 3, 4, 5 - REQUIRED COURSES		UNITS
BKN 790	Research	1-12
BKN 794abcdz	Dissertation 2	2-2-2-0
YEAR 6 - REQUIRED	COURSES	UNITS
PT 682	Physical Therapy	
	Management of the	
	Orthopedic Inpatient	5
PT 692	Physical Therapy	
	Management of the	
	Neurological Inpatient	t 5

A minimum of 116 units is required for completion of this program.

#### **Estimated Calendar of Study**

Basic and Clinical Science Foundation Courses (Years 1, 2)

The student will enroll in all required course work and clinical experiences *excluding* PT 682, PT 692, BKN 790 and BKN 794abcdz.

#### Qualifying Exam (Year 3)

The student will select a guidance committee and begin preparing a research proposal (register for BKN 790). During this time, the student is encouraged to enroll in key elective courses, both inside and outside the department, which will enhance research proposal development. The expectation is that the student will sit for the qualifying exam and achieve doctoral candidacy at the end of year three.

## Research and Dissertation Preparation (Years 4, 5)

The student will complete the research project and prepare a dissertation (register for BKN 790 and BKN 794). The expectation is that the student will successfully defend the dissertation by the end of year five.

Completion of Internship Requirement (Year 6) The student will complete the required internships to achieve clinical competency (register for PT 682 and PT 692).

## Courses of Instruction

#### **BIOKINESIOLOGY (BKN)**

The terms indicated are *expected* but are not *guaranteed*. For the courses offered during any given term, consult the *Schedule of Classes*.

#### 550 Neurobehavioral Basis of Movement

**(4, Sp)** Introduction to the neurobehavioral and neurobiological basis of movement. Review of information processing, neural basis of perception/action, motor systems, and higher cognitive function and behavior. *Recommended preparation:* biology and physiology.

**551 Musculoskeletal and Biomechanical Basis of Movement (4, Fa)** Introduction to the mechanical properties of the musculoskeletal system. Review of connective tissue and muscle mechanics, arthrology, anatomical design and statics. Laboratory dissections illustrate biomechanical concepts.

- **552** Physiological Basis of Voluntary Movement **(4, Sp)** Consideration of the neuromuscular and musculoskeletal physiology of voluntary movement.
- **553 Gait Analysis, Observational (2, 2 years, Fa)** Sequential segmental analysis of the major body segments. Emphasis on the specific gait deviations related to neurological and musculoskeletal pathology. Lecture and laboratory.
- **559 Readings in Biokinesiology (1-4, max 8, FaSpSm)** Independent review and synthesis of papers appearing in the current literature.
- **561** Independent Study in Electrophysiologic Measurement (4, Irregular) Methods of assessing muscle and nerve integrity with nerve conduction velocity and electromyographic techniques.
- **563 Biomechanics (2, 2 years, Sp)** Advanced study of the kinematics of human motion. Emphasis on the inverse dynamics solution to qualify forces and moments of force. Lecture and demonstration.
- 565 Neurophysiology of Motion (4, Sp)

Survey of peripheral and central nervous systems with emphasis on neuronal signals, motor and sensory integration, vestibular and proprioceptive mechanisms, facilitation and inhibition.

**566** Neurobiology of Locomotion (2) Topics include developmental biology of embryonic motility, central pattern generators, descending neural regulation, sensory modulation, and perception/action influences on the motor control of locomotion. *Prerequisite:* BISC 524, BISC 525; *recommended preparation:* BKN 550.

## 568ab Objective Measurement of Physical Performance (a: 3, Sp; b: 3, Irregular)

a: Instrumentation for clinical evaluation; to include measures of force, work, gait, motion, and kinesiologic electromyography; elements of biophysics; and introduction to electronics. b: Instrumentation for clinical evaluation of cardiovascular, energy consumption, and respiratory system performance.

- **573ab Advanced Dissection Anatomy (2-2, FaSpSm)** Advanced analysis of systems or structures with dissection. Emphasis on correlations with function.
- **576 Seminar (1, max 2, FaSp)** Advanced topics related to the science of physical therapy. Graded CR/NC.

- **581 Arthrology (2)** Design, friction, wear and lubrication of interacting joint surfaces in relative motion. Significance of active and passive articular constraints in joint motion analysis. Application to rehabilitation, prosthetic design, surgery, and modeling. *Prerequisite*: PT 514, PT 557.
- **587ab Physiological Correlates of Therapeutic Exercise (4-4, FaSp)** *a:* Responses of the physically handicapped to exercise. Emphasis on muscle, energy metabolism, body temperature, environment, endocrine considerations. Strengthening, training, endurance, and evaluation of performance. *b:* Responses of the physically handicapped to exercise, with emphasis on cardiovascular and respiratory adaptations and pathology.
- **588** Physiology and Biomechanics of Resistance Exercise (2, Sp) Science of resistance-exercise prescription, adaptation, and outcome assessment. Topics include periodization, neuromuscular and connective-tissue adaptation, special populations, and biomechanical considerations.
- 590 Directed Research (1-12, FaSpSm)

Research leading to the master's degree. Maximum units which may be applied to the degree to be determined by the department. Graded CR/NC.

- **593** Behavioral Basis of Motor Control and Learning (3, Sp) Seminar in movement science dealing with the behavioral basis of motor control and learning from an information processing perspective. *Recommended preparation:* statistics; psychology.
- **594abz Master's Thesis (2-2-0)** Credit on acceptance of thesis. Graded IP/CR/NC.
- **599 Special Topics (2-4, max 8, FaSpSm)** Studies of scientific theory in physical therapy.
- 653 Gait Analysis, Instrumented (4, Sp)

Measurement and correlation of foot switch, force plate, electrogoniometry, photography, and kinesiological EMG data in normal and pathological gait. *Prerequisite:* BKN 553 and BKN 568a.

- **656ab Recent Advances in Biokinesiology (2-2, FaSpSm)** Newer techniques in biokinesiology research.
- **667 Scientific Basis of Skeletal Adaptation** (3, Irregular) Physiological and structural adaptation of bone and joint tissues associated with development, aging, movement and loading. Lecture.

- **672** Advanced Independent Study in Biokinesiology (1-4, max 8, FaSpSm) Examination of selected mechanisms underlying normal movement and pathological movement. Ph.D. students only.
- **790 Research (1-12, FaSpSm)** Research leading to the doctorate. Maximum units which may be applied to the degree to be determined by the department. Graded CR/NC.
- **794abcdz Doctoral Dissertation (2-2-2-0, FaSpSm)** Credit on acceptance of dissertation. Graded IP/CR/NC.

#### PHYSICAL THERAPY (PT)

- **507** Professional Practice: Therapist Perspective (2, Fa) Identification of personal values, attitudes and beliefs and their relationship to personal development into a health care provider. Emphasis on communication skills, ethics, and professional guidelines, laws and regulations.
- **509** Cellular and Systems Physiology (3, Fa) Selected subjects in cellular and systems physiology. Emphasis on molecular and cellular aspects of neuromuscular function; also renal and endocrine physiology.
- **514L Musculoskeletal Anatomy (4, Fa)** Musculoskeletal anatomy, innervation, blood supply, and function: intensive study of the head, neck, trunk, and limbs. Lecture, dissection laboratory.
- **516 Principles of Disease (2, Fa)** Principles and mechanisms of genetics, immunology, infection, wound healing, and oncology. Lecture.
- 521L Basics of Patient Management (4, Fa)

Development of basic decision-making skills, professional behaviors and impairment assessment in patients with musculoskeletal neurologic and/or cardiopulmonary dysfunction. Lecture, laboratory.

- **529** Life Span Motor Control (3, Fa) Introduction to sensorimotor systems, overview of current perspectives in motor control from fetus through late adulthood, and clinical tests of motor proficiency. Lecture, limited laboratory.
- **530** Therapeutic Exercise (2, Sm) Theoretical and practical principles for evaluation of exercise need and prescription of exercise programs, specifically for strength and balance. Emphasis on approaches for patients with musculoskeletal deficits. *Prerequisite:* PT 621*L*.

**534L Neuroanatomy (3, Sm)** Organized approach to structures in the brain, spinal cord and peripheral nervous systems that subserve motor, sensory, and integrative functions, memory, cognitive and special senses. Lecture, laboratory.

## 536 Pathology of Cardiopulmonary Disease and General Medical Conditions (4, Fa)

Pathology and pathophysiological mechanisms in disease of the cardiac, pulmonary and circulatory systems; examination of diabetes, burns, and other disabling medical disorders. Lecture. *Prerequisite*: PT 509, PT 514*L*, PT 516, PT 521*L*, PT 529.

- **539** Clinical Pharmacology (1, Fa) Effects of commonly used drugs in patients with physical disability; side effects that alter physical performance or responses to exercise.
- **546** Neuropathology (3, Sp) Pathology in the central and peripheral nervous systems that alter motor and sensory performance. Emphasis on loss of motion, excessive and involuntary movement disorders. Lecture. *Prerequisite:* PT 516, PT 534*L*.
- **547** Professional Practice: System Perspective (2, Sm) Analysis of the integration of physical therapy practice into the national health care system; administration, budgeting and reimbursement for physical therapy services.
- **549L Clinical Exercise Physiology (4, Fa)** Adaptation of the human body to exercise and the use of exercise to modify human function. Lecture and laboratory.
- **551L** Therapeutic Application of Physical Agents (2, Sp) Physiologic responses to the application of thermal, mechanical, electromagnetic and hydrodynamic therapeutic procedures. Evaluation procedures and intervention planning. Lecture, laboratory. *Prerequisite*: PT 521*L*.
- **554L Analytical Anatomy (3, Sp)** Detailed kinesiologic analysis of axial, spine, head, neck, face and bulbar muscles. Lecture, laboratory and clinical demonstration. *Prerequisite:* PT 514*L*.
- **557** Professional Practice: Patient Perspective (2, Sp) Examination of issues related to professional-patient relationships, culture, lifestyles, ethnicity, gender and age. Emphasis on communication within a patient care model.
- **566** Disorders of the Musculoskeletal System (3, Sp) Regional description of pathology and pathophysiological mechanisms of disorders of bone, connective tissue, and joints. Lecture, demonstration.

#### 569 Fundamentals of Neuroscience (4, Sp)

Detailed analysis of neurophysiologic mechanisms underlying normal and abnormal motor and sensory function. Lecture. *Prerequisite:* PT 509, PT 516, PT 529, PT 534*L*.

- **570 Technology in Teaching and Use of Multimedia (1-5, Irregular)** Development of teaching units and their evaluation. Experience in preparation of instructional media using state-of-the-art technology. Hours and credit to be arranged. Lecture, demonstration and directed experience. (Duplicates credit in former BKN 570.)
- **571L** Clinical Management of Cardiopulmonary Dysfunction (3, Fa) Physical therapy evaluation and intervention in the care of patients with circulatory, cardiac, or pulmonary dysfunction. Lecture, case presentations, laboratory. *Prerequisite:* PT 521*L*.
- 573 Physical Examination and Differential Diagnosis in Patients with Medical Disorders (2, Fa) Physical assessment and differential diagnosis in common medical conditions. Emphasis on factors that influence physical therapy or require referral back to the physician.
- **574** Clinical Biomechanics (3, Fa) Introduction to the principles of biomechanics (statics, dynamics) as they apply to physical therapy practice. Emphasis on tissue mechanics, joint function and gait. Lecture. *Prerequisite*: PT 554*L*.
- **581L Clinical Management of the Patient** with Neurological Dysfunction (5, Fa) Physical therapy theory and methods for intervention in neurological dysfunction. Lecture, laboratory. Neuroanatomy lab available. *Prerequisite:* PT 509, PT 516, PT 521*L*, PT 529, PT 534*L*.
- **582 Mechanics of Human Gait (2, Sp)** Introduction to both normal and pathological gait. Emphasis on the basic components of abnormal ambulation including temporal-spatial factors, joint motion, kinetics, kinematics, and muscle activity. Lecture.
- **583L Clinical Electrophysiology (3, Sp)** Use of electrical currents to evaluate and treat musculoskeletal, neurological and wound disorders. Theory and practice. Lecture, laboratory. *Prerequisite*: PT 514*L*, PT 554*L*.
- 585 Physical Examination and Differential Diagnosis in Patients with Neurological Disorders (2, Fa) Physical examination and differential diagnosis in neurologic disorders. Emphasis on factors that influence physical therapy or require referral back to the physician.

- 591 Physical Examination and Differential Diagnosis in Patients with Orthopedic Disorders (2, Sp) Physical examination and differential diagnosis in orthopedic disorders. Emphasis on factors that influence physical therapy or require referral back to the physician.
- **592** Capstone Project (1-6, max 6, FaSpSm) Synthesis of knowledge gained in the pursuit of D.P.T. degree through a case study, a learning module for students or patients, a business plan for a unique form of health care delivery, or some other innovative concept. The primary faculty advisor will determine the unit value of the project.
- 595abcd Residency in Advanced Clinical Physical Therapy (1-4 each, FaSpSm) Residency open to students pursuing a Graduate Certificate in Orthopedic Physical Therapy or Neurologic Physical Therapy or the postprofessional D.P.T. program. Graded CR/NC. P.T. Licensure required.
- 600abcdez Clinical Clerkship (1-3-1-1-3-0, **FaSpSm)** a: Practical experience in two- or six-week physical therapy manual skills, decision making and professional behaviors. b: Practical experience in six-week physical therapy manual skills, decision making, and professional behaviors. c: Practical experience in two-week physical therapy psychomotor skills, decision making and professional behaviors. d: Practical experience in twoweek physical therapy psychomotor skills, decision making and professional behaviors. e: Practical experience in six-week physical therapy psychomotor skills, decision making and professional behaviors. Graded CR/NC. Prerequisite: b: PT 521L, PT 551L, PT 621L; d: PT 571L, PT 581L, PT 583L.
- **605 Orthopedic Radiology (2, Fa)** Study of normal and pathologic skeletal radiographic examinations.
- **606 Clinical Imaging (3, Fa)** Elements of reading roentgenographs, CAT and MRI scans for the physical therapist. Lecture, demonstration, practical experience.
- **607 Clinical Scanning (2, Sp)** Survey of diagnostic imaging for orthopedic and neurologic disorders seen in physical therapy practice.
- **608** Pharmacotherapeutics **(2, Fa)** Indications, contraindications, physiologic mechanisms, and side-effects of pharmacologic agents. Analysis of interactions between drugs and physical therapy interventions.
- **612L Physical Therapy Management of Spinal Disorders (2, FaSpSm)** Advanced evaluation and treatment skills for the management of individuals with spinal disorders. Lecture, laboratory. *Prerequisite:* PT 600*d*.

- **613L Physical Therapy Management of the Foot and Lower Quarter (2, Fa)** Advanced evaluation and treatment skills for management of individuals with lower extremity disorders. Lecture, laboratory. *Prerequisite:* PT 600*d.*
- **614L Evaluation and Management of Hand Dysfunction (2, Sp)** Pathology, evaluation, differential diagnosis and treatment of hand and wrist dysfunction. Lecture, laboratory. *Prerequisite:* PT 600*d.*
- **615** Management of the Complicated Patient (2, Sp) Physical therapy management of the patient with multiple medical diagnoses and complicating factors. Case study content focus. Lecture, discussion. *Prerequisite:* PT 600*d*.
- **616** Contemporary Issues in Physical Therapy Practice (3, Sm) Business and professional ethics, regulation from government programs and third party payers, infringement into physical therapy practice from other professions, and reimbursement issues. Lecture.
- **618L Seminar in Advanced Neurological Rehabilitation (2, Sp)** Advanced evaluation treatment, and problem solving skills for the individual with neurological dysfunction. Lecture, laboratory. *Prerequisite:* PT 600*d.*
- **619L Clinical Electrophysiology (2, Fa)** Advanced evaluation and treatment of individuals with peripheral nerve disorders using electrotherapy. Lecture, laboratory. *Prerequi*-

site: PT 600d.

**621L Clinical Management of the Patient** with Musculoskeletal Dysfunction (5, Sp) Physical therapy theory and methods of evaluation and treatment of orthopedic dysfunc-

uation and treatment of orthopedic dysfunction. Lecture, demonstration, laboratory. Dissection lab available. *Prerequisite*: PT 514*L*, PT 521*L*.

**622** Advanced Management of Spinal Disorders (3, FaSpSm) Theoretical and practical foundations in orthopedic rehabilitation of spinal disorders with emphasis on differential diagnosis from systemic manifestation. Lecture, laboratory, and case presentations. Open to licensed physical therapists only.

**623** Advanced Management of Extremity Disorders (3, FaSpSm) Theoretical and practical foundations in orthopedic rehabilitation of occupational, recreational and athletic disorders of the extremities; emphasis on differential diagnosis from systemic manifestations. Lecture, laboratory, and case presentations. Open to licensed physical therapists only.

## 624abL Neurological Differential Diagnosis and Therapeutic Interventions (3-3, FaSp)

Theoretical and practical foundations of clinical practice for specialization in neurologic physical therapy. *a:* Principles of neurologic differential diagnosis, mechanisms of neurorecovery and rehabilitation of focal neurologic disorders covered. *b:* Emphasis on advanced skills in neurologic differential diagnosis and rehabilitation for complex neurologic disorders.

- **626** Management of Geriatric Conditions (3, FaSp) Physical therapy evaluation and management of conditions in aging with emphasis on bone mineralization, elasticity of soft tissues, the senile dementias and CNS degeneration. Seminar, clinical laboratory.
- **627** Management of the Pediatric Patient (3, FaSp) Physical therapy examination and management of pediatric patients from birth to 21 years of age focusing on the family-centered approach. Seminar, clinical laboratory. Open to third year D.P.T. students only.
- **636ab Grand Rounds (1-1, FaSp)** Student case studies, oral presentations, and written patient outcome reports. *Prerequisite*: PT 600*d*.
- **642abc Evidence Based Practice (2-2-2, a: Sm, b: Fa, c: Sp)** *a:* Practical considerations of evidence-based practice including patient interviews and search methods. *b:* Development of critical analysis skills of evidence to enhance critical thinking. *c:* Focus on evidence-based decision making using patient perspectives to effect optimal function outcomes. *Prerequisite:* PT 521L, PT 621L.

- **646L Pathokinesiology of Gait (3, Fa)** Organized approach to clinical diagnosis and management of normal and dysfunctional human locomotion. Techniques of observational and instrumented gait analysis. Lecture, videointeractive learning, laboratory. *Prerequisite:* PT 582.
- **650** Differential Diagnosis in Physical Therapy (1, Sm) Consideration of principle of differential diagnosis with emphasis on mastering this skill. *Prerequisite*: completion of years 1 and 2.
- **654** Physical Therapy Intervention in Pediatrics (2, Sm) Physical therapy management of commonly encountered pediatric diagnoses. Seminar, clinical laboratory. Open to students enrolled in physical therapy degree programs only.
- 681 Physical Therapy Management of the Orthopedic Outpatient (3, FaSpSm)

Clinical internship in the outpatient orthopedic physical therapy setting. Tutorial. Graded CR/NC. *Prerequisite*: PT 600*d*.

682 Physical Therapy Management of the Orthopedic Inpatient (5, FaSpSm)

Clinical internship in the acute inpatient orthopedic physical therapy setting. Tutorial. Graded CR/NC. *Prerequisite:* PT 600*d*.

- **691** Physical Therapy Management of the Neurologic Outpatient (3, FaSpSm) Clinical internship in outpatient neurology physical therapy setting. Tutorial. Graded CR/NC. *Prerequisite:* PT 600*d*.
- **692** Physical Therapy Management of the Neurologic Inpatient (5) Clinical internship in acute inpatient neurologic physical therapy setting. Tutorial. Graded CR/NC. *Prerequisite*: PT 600*d*.
- **693** Physical Therapy Management of the General Medicine Inpatient (5, FaSpSm) Clinical internship in inpatient ICU or general medicine physical therapy setting. Tutorial. Graded CR/NC. *Prerequisite:* PT 600*d*.

## **Occupational Science and Occupational Therapy**

Health Sciences Campus Center for the Health Professions 1540 Alcazar St., CHP 133 Los Angeles, CA 90089-9003 (323) 442-2850 Toll Free: (866) 385-4250 FAX: (323) 442-1540 Email: otdept@hsc.usc.edu www.usc.edu/hsc/ibp/ot

#### Faculty

Chair and Professor: Florence A. Clark, Ph.D., OTR

Professors: Stanley Azen, Ph.D.; Florence A. Clark, Ph.D., O.T.R.; Cheryl Mattingly, Ph.D.; Ruth Zemke, Ph.D., O.T.R.; Gelya Frank, Ph.D.

Associate Professors: Jeanne Jackson, Ph.D., O.T.R.; Mary Lawlor, Sc.D., O.T.R.; Loren Lipson, M.D.; Ann Neville-Jan, Ph.D., O.T.R.; L. Diane Parham, Ph.D., O.T.R.

Professor of Clinical Occupational Therapy: Linda Fazio, Ph.D., O.T.R.

Assistant Professors of Clinical Occupational Therapy: Erna Blanche, Ph.D., O.T.R.; Diane Kellegrew, Ph.D., O.T.R.; David Leary, M.A., O.T.R.

Research Professor: Michael Carlson, Ph.D.

Adjunct Professor: Lela Llorens, Ph.D.

Adjunct Assistant Professor: Anne Dunlea, Ph.D.

Instructors of Clinical Occupational Therapy: C. Fitzgerald, B.S., O.T.R.; D. Gordon, M.A., O.T.R.; Sarah Kelly, O.T.R.; Julie McLaughlin Gray, M.A., O.T.R.; Kimberly Morris, M.A., O.T.R.; Whitney Pike, B.S., O.T.R.; Deborah Pitts, M.B.A., O.T.R.; J. Meyer, M.A. O.T.R.; J. Vartanian, B.S., O.T.R.

Voluntary Clinical Faculty: Michal Atkins, M.A., O.T.R.; Gitu Bhavnani, M.A., O.T.R.; Julie Bissell, M.A., O.T.R.; Sue Bowles, M.A., O.T.R.; Terri Chew-Nishimura, M.A., O.T.R.; Gina Coleman, M.A., O.T.R.; Lisa Deshaies, O.T.R.; Dottie Ecker, M.A., O.T.R.; Julie Johnson Espinoza, M.A., O.T.R.; John Fisher, O.T.R.; Linda Florey, Ph.D., O.T.R.; Sandra Greene, M.A., O.T.R.; Kathy Gross, M.A., O.T.R.; Elise Holloway, M.A., O.T.R.; Sue Knox, M.A., Ph.D., O.T.R.; Sharon Lee, C.H.T., O.T.R.; Zoe Mailoux, M.A., O.T.R.; Shay McAtee, M.A., O.T.R.; Karen Ozaki, O.T.R.; Suzanne Smith Roley, M.S., O.T.R.; Lisa Test, M.A., O.T.R.; Lora Woo, O.T.R.; Lynn Yasuda, O.T.R

*Emeritus Professors:* Mary Reilly, Ed.D., O.T.R.; Elizabeth J. Yerxa, Ed.D., O.T.R.

#### **Degrees Offered**

The Department of Occupational Science and Occupational Therapy offers a Bachelor of Science in Occupational Therapy and a minor in occupational science. The Master of Arts in Occupational Therapy is offered for students whose first degree is in another field as well as for registered occupational therapists seeking a post-professional degree. The department also offers the Doctor of Occupational Therapy and the Ph.D. in Occupational Science.

The Representative Assembly of the American Occupational Therapy Association voted in 1999 to delete all entry-level bachelor programs as of 2007. At that time, entry to occupational therapy practice will be at the graduate degree level only.

#### Pi Theta Epsilon

Pi Theta Epsilon is a national honor society for occupational therapy students and alumni. This society recognizes and encourages superior scholarship among students enrolled in undergraduate and entry-level graduate programs of occupational therapy across the United States.

The Alpha Eta Chapter of Pi Theta Epsilon at the University of Southern California selects candidates early in the spring semester of each year based on their academic standing and their potential for leadership in the profession.

#### Bachelor of Science

The undergraduate curriculum leads to the Bachelor of Science with a major in occupational therapy. An additional six-month internship is required for students to qualify for the national examination leading to certification by the National Board for Certification in Occupational Therapy. Professional study begins in the summer preceding the senior year; however, some classes may be taken during the junior year. Major academic course work is completed during the senior year.

#### **Admission Requirements**

The major in occupational therapy is a competitive program which requires all interested students to apply directly to the Department of Occupational Science and Occupational Therapy. Applicants must be enrolled at USC and must complete one semester, or more, of full-time study prior to enrolling in the major. Freshmen may apply following completion of their freshman year. Juniors must apply by January 15 for the program beginning the following June. To begin taking classes in the junior year, sophomores must apply by April 30. Applications from underclassmen are reviewed as they are received during the academic year; juniors are reviewed after the January 15 deadline, and students are selected competitively according to the number of spaces available. Applicants will be notified as soon as admission decisions are made and every effort will be made to notify each applicant as rapidly as possible. The department's ability to process applications is dependent on receipt of complete and timely information.

Students may enter USC declaring preoccupational therapy (POT) as their professional objective at the freshman, sophomore or junior level. It is recommended that students transferring from other institutions enter USC no later than the first semester of their junior year. Two admissions applications are required for transfer students, one for the USC Undergraduate Admission Office and one for the Department of Occupational Science and Occupational Therapy. See the Admission section of this catalogue.

Requirements for admission are: (1) a cumulative grade point average of at least 2.75 in undergraduate courses completed; (2) a grade of "A" or "B" in occupational therapy prerequisite courses; (3) completion of all College of Letters, Arts and Sciences general education requirements; (4) exposure to and exploration of occupational therapy as a career choice; (5) understanding of occupational therapy as demonstrated in autobiographical statement; and (6) satisfactory health status for professional activities and demands. No applicant will be denied admission on the basis of race, religion, creed or disability, provided functional health is sufficient to meet professional needs, both in the student role and as an entry-level practitioner.

#### **Application Procedures**

Applications will be reviewed when the following materials have been received by the Department of Occupational Science and Occupational Therapy: (1) completed departmental application form; (2) official transcripts with grades from all colleges or universities attended; (3) autobiographical statement including reasons for wanting to enter the profession, concept of occupational therapy, experience, personal data, skills and accomplishments; (4) three letters of recommendation from professors, employers or other professional people not related to applicant, sent directly to department or delivered in a sealed envelope. Admitted students must complete all prerequisite course work by time of entry into the department (the department must be informed of grades as completed and applicants should keep the department informed in writing of their plans and progress).

#### Deadline

The deadline for junior applications is January 15 for the program beginning in June. Students wishing to begin taking classes in the junior year must apply by April 30.

#### **Program Requirements**

A total of 128 units is required for the Bachelor of Science degree.

#### Prerequisites

Prerequisites to the Bachelor of Science program include at least one four-unit course in each of the following subjects: human anatomy with a laboratory and human physiology with a laboratory (or combined anatomy/ physiology with laboratory for a two-semester sequence); introductory general psychology; introductory general sociology or cultural anthropology; abnormal psychology; and life span human growth and development.

Students who wish prerequisite credit for courses transferable from another institution must gain departmental approval for such courses prior to entry into the occupational therapy program.

#### **General Education Requirements**

The university's general education program provides a coherent, integrated introduction to the breadth of knowledge you will need to consider yourself (and to be considered by other people) a generally well-educated person. This program requires six courses in different categories, plus writing, diversity and foreign language requirements, which are described in detail on pages 179 through 184.

#### **Major Requirements**

ι	JNITS
Occupational Therapy	
Skills Theory I	4
Medical Lectures	4
Developmental Concepts	
and Occupation	4
Foundations of	
Occupation/Kinesiology	2
Foundations of	
Occupation/Neurology	2
Occupational Therapy,	
Theory and Practice/	
Physical Disabilities	4
Occupational Therapy,	
Theory and Practice/	
Psychosocial	
Dysfunction	4
Occupational Therapy	
Skills Theory II	2
Occupational Therapy	
Skills Theory III	4
Advanced Occupational	
Therapy Theory —	
Psychosocial	3
Advanced Occupational	
Therapy Theory —	
Physical Dysfunction	3
Advanced Occupational	
Therapy Theory —	
Pediatrics	3
Advanced Occupational	
Therapy Theory —	
Adolescence,	
Adulthood, and Aging	3
	Occupational Therapy Skills Theory I Medical Lectures Developmental Concepts and Occupation Foundations of Occupation/Kinesiology Foundations of Occupation/Neurology Occupational Therapy, Theory and Practice/ Physical Disabilities Occupational Therapy, Theory and Practice/ Psychosocial Dysfunction Occupational Therapy Skills Theory II Occupational Therapy Skills Theory III Advanced Occupational Therapy Theory — Psychosocial Advanced Occupational Therapy Theory — Physical Dysfunction Advanced Occupational Therapy Theory — Physical Dysfunction Advanced Occupational Therapy Theory — Pediatrics Advanced Occupational Therapy Theory — Pediatrics Advanced Occupational Therapy Theory — Adolescence,

OT 485	Occupational Science	
	and Occupational	
	Therapy	2
OT 486	Clinical Internship	
	with Seminar	4

Electives may be taken to make a total of the 128 units required for graduation. Enrollment in occupational therapy courses is limited to students selected by the Department of Occupational Science and Occupational Therapy.

#### **Scholastic Standards**

Students must maintain a minimum grade point average of 2.67 (A = 4.0) in required courses at least two out of the three semesters for continuation in the program.

#### Counseling

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Prerequisite counseling and other advisement are available from the department.

#### **Minor in Occupational Science**

The department offers a minor in the dynamic new discipline of occupational science. It is one of the only programs in the world that offers undergraduates the opportunity to explore this field.

Unlike other creatures, humans are innately driven to fill their time with interesting, meaningful activities, which scholars call "occupations." That is, humans need to be occupied. These occupations have a profound impact on physical and mental health, one's sense of well-being and the experience of quality of life. Occupational Science seeks to understand the precise nature and function of occupations and the critical effect of daily activity on human beings. Scientists working in the field examine questions such as: what is the relationship between childhood occupations and adult competency and achievement; what constitutes a healthy balance of work, rest and leisure; what factors contribute to a good fit between a particular individual and his or her occupations; as well as many other issues.

The minor in occupational science requires a total of 20 units including a gateway course (OT 250) plus four upper division courses selected from seven course offerings. It is open to all majors at USC.

LOWER DIVISION: GATEWAY COURSE	
Introduction to	
Occupational Science	
and Occupational	
Therapy	4
	Introduction to Occupational Science and Occupational

UPPER DIVISION:	4 COURSES REQUIRED L	INITS	OT 325	The Biosocial Context		OT 360	Creating the Self through	
OT 300	Occupational Expressions of Diverse Identities and		OT 330	of Human Occupation Perspectives on the Daily Life of Families	4	OT 375	Narrative: Acts of Life Story Production The Narrative Structure	4
OT 320	Lifestyles The Nature of Human Occupation: Form, Function, and Meaning	4	OT 350	Disability, Occupations, and the Health Care System	4	01 0/3	of Social Action: Narrative, Healing, and Occupation	4

#### Master of Arts

The Department of Occupational Science and Occupational Therapy offers a Master of Arts degree with two routes of entry. Those with a baccalaureate degree in occupational therapy who are certified or eligible for certification by the National Board for Certification in Occupational Therapy begin taking graduate course work (500 level) immediately. Those with baccalaureate degrees in fields other than occupational therapy take 400-level courses before beginning graduate work. For these students, eligibility to sit for the National Board for Certification in Occupational Therapy examination occurs when all 400-level course work is completed, including the six months of internship, and the M.A. degree has been awarded.

#### **Admission Requirements**

For those with baccalaureate degrees in occupational therapy: prerequisites are a bachelor's degree in occupational therapy from an accredited college or university; registration (or eligibility for registration) by the National Board for Certification in Occupational Therapy; a minimum grade point average of 3.0 (A = 4.0); acceptable scores on the General Test of the Graduate Record Examinations; three letters of recommendation and an autobiographical sketch/statement of purpose.

For those with baccalaureate degrees in fields other than occupational therapy: prerequisites are a bachelor's degree from an accredited college or university; successful completion of the following courses: human anatomy with laboratory, human physiology with laboratory (or combined anatomy/physiology for a two-semester sequence), human life span development, introductory psychology, abnormal psychology, and either cultural anthropology or sociology.

Also required are a minimum undergraduate grade point average of 3.0; a minimum grade point average of 3.0 in departmental prerequisite courses (see above) with no course work grade less than "C" (pass/fail grading is

not acceptable for the departmental prerequisites); acceptable scores on the General Test of the Graduate Record Examinations; three letters of recommendation and a statement of purpose/autobiographical sketch.

Courses prerequisite to master's degree work include: OT 405, OT 415, OT 420, OT 440, OT 441, OT 452, OT 453, OT 463, OT 464, OT 465, OT 466, OT 467, OT 468, OT 485 and OT 486.

#### **Application Procedure**

For those with baccalaureate degrees in occupational therapy: applications are accepted at any time, preferably by February 15 for fall admission and October 15 for spring admission.

For those with degrees in fields other than occupational therapy: applications are due February 15. The 400-level courses which are prerequisites to 500-level work in occupational therapy begin in June.

Applications received after the February 15 deadline are considered on a space available basis. Application materials include: (1) separate Application for Graduate Admission; (2) departmental application form obtained from the Occupational Science and Occupational Therapy Department; (3) three references indicating the applicant's perspectives on occupational therapy; (4) transcripts from all colleges/universities attended; (5) results of the aptitude test of the Graduate Record Examinations. This should be taken no later than February prior to summer and fall admission requests and no later than October for spring semester requests. A personal interview may be requested. Application must be made to the Department of Occupational Science and Occupational Therapy, 1540 Alcazar Street (CHP 133), Los Angeles, CA 90089-9003, as well as to the USC Admission Office. Transcripts must be sent to the department as well as to the Admission Office.

#### International Students

Occupational therapists educated outside of the United States must have credentials evaluated by the Office of Admission before application to the department can be reviewed. See the Admission section of this catalogue. International students must demonstrate competency in English, as measured by the Test of English as a Foreign Language (TOEFL).

#### **Degree Requirements**

This degree is under the jurisdiction of the USC Graduate School. Students should also refer to the Graduate School section of this catalogue (page 591) for general regulations. All courses applied toward the degree must be courses accepted by the Graduate School.

Requirements include: GPA of 3.0 in all course work attempted and all course work applied to the degree; at least 2/3 of units applied to the degree must be at the 500 level or higher.

REQUIRED COURSES FOR BOTH OPTIONS		
OT 506	History of Occupational	
	Therapy Practice	4
OT 507	Theory in a Practice	
	Profession	4
OT 510	Quantitative and	
	Qualitative Analysis of	
	Occupational Data	4
OT 550	Occupational Behavior	
	Model	4
OT 588	Research Methods	4

#### Thesis Option

A minimum of 28 units is required: 20 units of required courses, four units of elective and four units of OT 594ab Master's Thesis. Acceptance of the thesis by the guidance committee and the university completes the degree.

#### Comprehensive Examination Option

A minimum of 32 units is required: 20 units of required courses, four units of elective and eight units of occupational therapy electives. Successful performance on a written comprehensive examination administered on campus each semester completes the degree.

#### Doctor of Occupational Therapy

The Doctor of Occupational Therapy (O.T.D.) program prepares occupational therapists for leadership positions in health care, with a focus on applying knowledge developed in occupational science to practice health care policy and health care management. The O.T.D. program is designed to complement the Ph.D. program in occupational science. The Ph.D. degree is an academic degree that prepares students to conduct original research that will expand the knowledge base regarding occupation; the O.T.D. degree is a professional degree that focuses on the practical application of knowledge about occupation in order to solve realworld health care problems in clinical and community settings.

Graduates are expected to demonstrate a solid understanding of occupational science research findings, to appropriately utilize research regarding occupation to guide therapeutic decision-making, and to integrate knowledge of occupation with information from other disciplines and professions in order to make sound clinical, administrative and policy decisions. In addition, each O.T.D. graduate is expected to acquire advanced skills in one or more of the following areas: development of innovative service programs, public policy formulation and evaluation or administration of health care systems.

#### **Admission Requirements**

Applicants for admission to the O.T.D. program are expected to have at least a baccalaureate degree from an accredited college or university and must be certified or licensed as an occupational therapist, or be eligible to sit for the examination administered by the National Board for Certification in Occupational Therapy (NBCOT). A minimum GPA of 3.0 (A = 4.0) and a minimum score of 1,000 on the combined verbal and quantitative sections of the Graduate Record Examinations are required. At least three letters of reference must be submitted as well as an autobiographical statement of purpose. Other considerations include evidence of leadership potential based on previous academic work as well as clinical experiences and professional accomplishments.

#### **International Students**

Occupational therapists educated outside of the United States must have credentials evaluated by the Office of Admission before applying to the department. See the Admissions section of this catalogue. International students applying to the department will be considered for admission if they have graduated from an occupational therapy program that is approved by the World Federation of Occupational Therapists and have completed all requirements for practice as an occupational therapist in their country. International students must demonstrate competence in English, as measured by the Test of English as a Foreign Language (TOEFL) examination.

#### **Degree Requirements**

The degree is awarded under the jurisdiction of the Graduate School. Refer to the Requirements for Graduation section, page 62, and the Graduate School section of this catalogue, page 591, for general regulations. All courses applied toward the degree must be courses accepted by the USC Graduate School.

#### **Course Requirements**

Satisfactory completion of 60 units beyond the baccalaureate degree is required.

REQUIRED OCCUPATIONAL THERAPY COURSES		UNITS
OT 506	History of Occupational	
	Therapy Practice	4
OT 507	Theory in a Practice	
	Profession	4
OT 510	Quantitative and	
	Qualitative Analysis	
	of Occupational Data	4
OT 550	Occupational Behavior	
	Model	4
OT 588	Research Methods	4

#### Clinical Experience Criterion

If, at the time of admission, the student has less than three years of clinical experience as a registered or licensed occupational therapist, he or she may be required to complete at least 8 units selected from the following list of courses:

OT 500abc	Clinical Problems in	
	Occupational	
	Therapy	2-4 each
OT 590	Directed Research	1-12
OT 610	Sensory Integrative	
	Dysfunction	4

Occupational Science Course Requirements
Completion of at least two courses (8 units) in the Ph.D. program in occupational science is required.

UNITS

OCCUPATIONAL SCIENCE COURSES (8 UNITS REQUIRED)		
OT 604	Temporal Adaptation: Organization and Use of Time	
OT 612	Information Processin	

# and Occupation 4 OT 650 Development of Adaptive Skills 4 OT 651 Adaptation and Disability 4 OT 653 Play and Occupation 4 OT 655 Work and Leisure 4

#### Cognate Requirement

Completion of at least 8 units of graduatelevel public administration course work in the School of Policy, Planning, and Development is required. Upon approval, courses in other USC departments may be substituted providing they clearly relate to the student's professional goals and are consistent with the objectives of the O.T.D. degree.

#### Residency Requirement

Students must complete 24 units of OT 686 Residency. The residency is intended to ensure that students completing the O.T.D. program demonstrate competence in integrating advanced practice, policy and administration skills with knowledge emanating from occupational science. At least 20 units applied toward the O.T.D. must be successfully completed before enrolling in OT 686. One of the semesters of OT 686 must entail a full-time residency, that is, registration for 12 units with no other course work undertaken simultaneously. The purpose is to ensure that students have an opportunity to fully immerse themselves in the application problems presented by their residency site. Faculty must approve the student's residency plan prior to enrollment. The student must present a portfolio demonstrating competence in program development, administration or policy formulation in the last semester of enrollment in OT 686 as the final step in completing the O.T.D. degree.

## Doctor of Philosophy

The Ph.D. in Occupational Science educates individuals to engage in the scientific study of human occupation, the purposeful activities that constitute our life experiences. This important new science is chiefly concerned with the unique capacity of humans to develop adaptive skills, such as tool use and related occupational behaviors, and to choose and orchestrate daily occupations. It also seeks to understand the function, structure and interrelationship of these occupations and their impact on individuals and institutions.

The focus on occupation distinguishes this program from closely-related disciplines such as psychology, sociology and anthropology. The program emphasizes the development of research skills and encourages students to organize and synthesize knowledge to contribute to occupational science theory, as opposed to therapeutic application.

#### **Admission Requirements**

Applicants for admission to the Ph.D. program are expected to have a baccalaureate degree in an appropriate field, such as one of the biological or social sciences or occupational therapy, with a minimum GPA of 3.0 (A = 4.0) and a minimum score of 1100 on the verbal and quantitative sections of the Graduate Record Examinations. At least three letters of reference must also be submitted. Other considerations include evidence of academic potential based on master's level study (if relevant), research skills and interest, and a statement of purpose. International students must demonstrate competency in English, as measured by the Test of English as a Foreign Language (TOEFL) examination.

#### **Degree Requirements**

This degree is awarded under the jurisdiction of the Graduate School. Refer to the Requirements for Graduation section (page 62) and the Graduate School section of this catalogue (page 591) for general regulations. All courses applied toward the degree must be courses accepted by the USC Graduate School.

#### **Course Requirements**

Satisfactory completion of 60 units beyond the baccalaureate degree is required, including the following courses:

REQUIRED COURSES		UNITS
OT 506	History of Occupational	
	Therapy Practice	4
OT 510	Quantitative and	
	Qualitative Analysis of	
	Occupational Data	4
OT 550	Occupational Behavior	
	Model	4
OT 588	Research Methods	4
OT 604	Temporal Adaptation:	
	Organization and Use	
	of Time	4
OT 612	Information Processing	
	and Occupation	4
OT 650	Development of	
	Adaptive Skills	4
OT 651	Adaptation and Disabilit	ty 4
OT 653	Play and Occupation	4
OT 655	Work and Leisure	4

Upon departmental approval, an elective may be substituted for a 500-level course if the student has previously completed graduate work encompassing similar content.

Those students who also wish to participate in clinical practice in occupational therapy may opt to complete a master's degree in occupational therapy. Such students are required to complete the requirements for that degree as well as the occupational therapy undergraduate major courses if they are not registered occupational therapists or eligible for registration prior to study.

#### Cognate Requirement

Completion of 12 units in a topic area such as one of the following is required: quantitative research approaches, qualitative research approaches, neuroscience, social development, life span development or gerontology.

#### Research Practicum

Each student will enroll in one unit of OT 660 Research Practicum in Occupation per semester during the first two years of doctoral level study. In this practicum the student will develop research skills by working as part of a research team under the direction of a faculty member.

#### Screening Procedures

Departmental screening will be required. Passing this procedure is prerequisite to continuation in the doctoral program. Directions for obtaining and filing the Report on Ph.D. Screening Procedures are found in the Graduate School section of this catalogue.

#### Dissertation Enrollment

Doctoral students must submit a dissertation according to the policies and procedures described in the Graduate School section of this catalogue. Registration in OT 794 Doctoral Dissertation for a minimum of four units (two units in each of two consecutive semesters) is required.

#### Foreign Language or Research Skills

The Ph.D. in Occupational Science does not require the demonstration of competence in a foreign language. However, each student is expected to achieve expertise, as defined by the student's guidance committee, in either qualitative or quantitative research techniques through participation in course work and the research practicum.

#### **Guidance Committee**

The guidance committee is composed of five faculty members. Three members of the committee must be regular faculty from the Department of Occupational Science and Occupational Therapy. Two additional members should be faculty from outside the department, one of whom must be a member of the faculty in the student's cognate area. Complete regulations for establishing a guidance committee are found in the Graduate School section of this catalogue.

#### **Qualifying Examination**

The qualifying examination is comprehensive in nature and requires the student to demonstrate a grasp of content from the core courses and the cognate area. The examination is both written and oral and is set and administered by the student's guidance committee. Refer to the Graduate School section of this catalogue for specific directions for filing a request to take the examination.

#### Dissertation

Doctoral students must submit a dissertation according to the policies and procedures of the Graduate School section of this catalogue. Upon approval of the preliminary copy of the dissertation by all members of the dissertation committee, the candidate must pass an oral defense of the dissertation. Upon successful completion of the oral defense and revisions, approval for final typing is granted and the committee recommends the candidate to the Graduate School for the Ph.D.

#### Teaching

To prepare students for anticipated roles as faculty members, a teaching component is incorporated into the program. Students who receive teaching assistantships will be required to assist in relevant teaching assignments for a minimum of one academic year. Those who do not receive teaching assistantships are required to present a minimum of six lectures or laboratory sessions.

#### **Additional Information**

Further information about the baccalaureate, master's and doctoral programs can be obtained by writing or calling the USC Department of Occupational Science and Occupational Therapy, 1540 Alcazar Street (CHP 133), Los Angeles, CA 90089-9003; (323) 442-2850, toll free (866) 385-4250, or by sending email to otdept@hsc.usc.edu. Information regarding the Department of Occupational Science and Occupational Therapy is available on the Web at www.usc.edu/hsc/ihp/ot.

#### Courses of Instruction

## OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY (OT)

The terms indicated are *expected* but are not *guaranteed*. For the courses offered during any given term, consult the *Schedule of Classes*.

**105g Culture, Medicine and Politics (4, Fa)** (Enroll in ANTH 105g)

**220** Introduction to Occupational Therapy **(2, FaSp)** Exploration of philosophy and practice of occupational therapy (helping the disabled regain independence), including visits to hospitals; designed for students considering a health career.

**250** Introduction to Occupational Science and Occupational Therapy (4) Introduction to concept of occupation and overview of human drive for meaningful activity; impact of occupations on health and well-being; analysis of personal occupational patterns; selected therapeutic applications.

**300** Occupational Expressions of Diverse Identities and Lifestyles (4) Exploration of the diverse ways occupational practices become central to identity, reify standard social ideologies, and are manipulated to redress conventional standards.

**305m Culture, Medicine and Politics (4, FaSp)** Survey of the impact of public institutions, the private sector, and cultural practices on health and the delivery of health care in the United States.

#### 310x Creativity Workshop (2, FaSpSm)

Theories and practice of the creative process in varied media, genres and occupations. Explores creativity in the arts, sciences, professions, evolution, daily life, and culture. **320** The Nature of Human Occupation: Form, Function, and Meaning (4) The complex nature of human occupation is covered from an interdisciplinary perspective. Emphasis is on how occupation contributes to human experience in a lived world.

**325** The Biosocial Context of Human Occupation (4) Hormonal and contextual (social, physical, and temporal) correlates of human occupations and psychological states; collection and interpretation of field data using innovative research methods.

**330** Perspectives on the Daily Life of Families (4) Examines family structures and processes, the occupational dimensions of families, and the meanings embedded in the acts of daily life of contemporary families.

**350** Disability, Occupations, and the Health Care System (4) Exploration of the ways in which able-bodyism, sexism, racism, classism and homophobia contribute to occupational opportunities or barriers and weave their way into health care.

**360** Creating the Self through Narrative: Acts of Life Story Production (4) Analysis of life stories, life histories, and testimonies in social interactions, texts, and films. Life stories are an occupation to re-create the "Self" in response to conflict and change.

**375** The Narrative Structure of Social Action: Narrative, Healing and Occupation (4) Narrative as guide and structure of practical action. Special emphasis on chronic illness and disability and narrative structure of clinical interactions.

**390** Special Problems (1-4) Supervised, individual studies. No more than one registration permitted. Enrollment by petition only.

**405** Occupational Therapy Skills Theory I **(4, FaSm)** Creative, manual, recreational, and self-care skills critical to occupational role function. Teaching and practice in laboratory and clinical settings. Lecture, laboratory, and clinic. Open only to OT majors.

**415 Medical Lectures (4, Fa)** Human pathology; classification and terminology, mechanisms of disease, description of the essentials of diseases of clinical significance. Lectures and clinical presentations by Medical School faculty. Open to OT majors; others by departmental approval.

**420** Developmental Concepts and Occupation (4, Fa) Biopsychosocial approach to human development; integration and effect upon acquisition of skills for the occupational role. Supervised experience in clinical observation and testing. Open only to OT majors.

**440 Foundations of Occupation/Kinesiology (2, SpSm)** Application of basic neuromusculoskeletal function to the performance of daily living tasks and activities; emphasis on integration of neurological knowledge with understanding of neuromuscular dysfunction. Open only to OT majors.

**441 Foundations of Occupation/Neurology (2, SpSm)** Application of basic neural func-

**(2, SpSm)** Application of basic neural function to the performance of daily living tasks and activities; emphasis on integration of neurological knowledge with understanding of neuromuscular dysfunction. Open only to OT majors.

**452** Occupational Therapy, Theory and Practice/Physical Disabilities (4, Fa) History, philosophy, and interpretation of occupational therapy practice in physical disabilities. Study of behavior as it relates to human competency and family adaptation, occupational choice, and satisfaction. Open only to OT majors.

## 453 Occupational Therapy, Theory and Practice/Psychosocial Dysfunction (4, Fa)

History, philosophy, and interpretation of occupational therapy practice in psychosocial dysfunction. Study of psychosocial function as it relates to core themes of intrinsic motivation, decision making, roles, temporal adaptation, skills and the environment. Open only to OT majors.

**463** Occupational Therapy Skills Theory II **(2, Fa)** Application of occupational therapy skills to creative problem solution and task analysis in the understanding of occupation. Open only to OT majors.

**464** Occupational Therapy Skills Theory III **(4, Sp)** Analysis of occupational therapy skills and activities in the understanding of the individual's participation in occupation. Particular emphasis will be given to the occupational tasks of supervision; and the design, management and marketing of occupational therapy services. Open only to OT majors.

**465** Advanced Occupational Therapy Theory — Psychosocial (3, Sp) Selected cases from occupational therapy practice in the area of psychosocial dysfunction; special emphasis on prevention, diagnosis, treatment, management, consultation, communication, and use of community resources. Open only to OT majors. *Prerequisite:* OT 405, OT 415, OT 420, OT 463.

#### 466 Advanced Occupational Therapy Theory — Physical Dysfunction (3, Sp)

Selected cases from occupational therapy practice in the area of physical dysfunction; with emphasis on prevention, diagnosis, treatment, management, consultation, communication, and use of community resources. Open only to OT majors. *Prerequisite:* OT 405, OT 415, OT 420, OT 463.

**467 Advanced Occupational Therapy Theory** — **Pediatrics (3, Sp)** Selected cases from occupational therapy practice with children; prevention, diagnosis, treatment, management, consultation, communication, and use of community resources in practice with children. Open only to OT majors. *Prerequisite:* OT 405, OT 415, OT 420, OT 463.

468 Advanced Occupational Therapy Theory — Adolescence, Adulthood, and Aging (3, Sp) Selected cases from occupational therapy practice with adolescents, adults and aged persons; with emphasis on prevention, diagnosis, treatment, management, consultation, communication, and use of community resources with these agerelated groups. Open only to OT majors. Prerequisite: OT 405, OT 415, OT 420, OT 463.

**485** Occupational Science and Occupational Therapy (2, Sp) Implications for the direction of occupational therapy practice based on the developing knowledge base in occupational science. Open only to OT majors.

**486** Clinical Internship with Seminar (1-2, max 6, FaSpSm) Clinical internship to qualify for professional certification. Seminar to integrate theory with application of treatment principles for various populations. Graded CR/NC. Open only to OT majors. *Prerequisite:* completion of all OT major academic requirements.

**490x Directed Research (2-8, max 8, FaSp)** Individual research and readings. Not available for graduate credit. *Prerequisite:* departmental approval. Open only to OT majors.

**499 Special Topics (2-4, max 8, FaSpSm)**Course content to be selected in occupational therapy and occupational science. *Prerequisite:* departmental approval.

**500abc Clinical Problems in Occupational Therapy (2-4, 2-4, FaSpSm)** Specific applications of occupational therapy practice in varied clinical/health settings. Seminar to integrate theory with application of intervention principles for various populations. Graded CR/NC.

**505 Seminar in Occupational Therapy (2-4)** Occupational therapy and the health care system. Open only to OT majors.

**506 History of Occupational Therapy Practice (4, Fa)** Critical historical review of theories and practices in occupational therapy; impact of projection of future models for practice; strategies for implementing change; historical method. Open only to OT majors.

**507** Theory in a Practice Profession (4, Sp) Development of models and theories in a practice discipline through scientific thought; criteria for assessing theories; general systems theory. Open only to OT majors.

**510** Quantitative and Qualitative Analysis of Occupational Data (4, Sp) Data analysis for the study of occupational patterns and occupation in therapy. Survey of methods used for statistical analysis and for analysis of qualitative methods.

#### 550 Occupational Behavior Model (2-4, Sp)

Treatment model applicable to all age and disability categories; holistic conceptualization including family and community systems, evaluation tools, and treatment approach; case method. Open only to OT majors.

**555 Seminar: Implementation of the Advocacy Model (2-4, Sp)** The patient as decision-maker in chronic care; competency development through activities of daily living, leisure skills, time organization and life goal planning; action research. Open only to OT majors.

**588 Research Methods (4, Fa)** Descriptive, comparative, and evaluative research methods; research tools and procedures; application of general systems theory. Open only to OT majors.

#### 590 Directed Research (1-12, FaSpSm)

Research leading to the master's degree. Maximum units which may be applied to the degree to be determined by the department. Graded CR/NC. Open only to OT majors.

**594abz Master's Thesis (2-2-0, FaSp)** Credit on acceptance of thesis. Graded IP/CR/NC. Open only to OT majors.

#### 599 Special Topics (2-4, max 8, FaSpSm)

Recent developments in occupational therapy and occupational science. *Prerequisite:* departmental approval.

**604** Temporal Adaptation: Organization and Use of Time (4, 2 years, Fa) Environmental, biological, psychological and socio-cultural influences on perceptions of and utilization of time. Implications for human adaptation.

**610 Sensory Integrative Dysfunction (4, FaSpSm)** Differential evaluation of sensory integrative dysfunction; theory and procedure for enhancing the processing of sensory data by children with learning and behavior disorders. *Prerequisite*: admission by advance application and instructor's approval only; must be certified as an occupational or physical therapist.

**612** Information Processing and Occupation **(4, 2 years, Fa)** Phylogenesis and ontogenesis of human information processing capacity enabling engagement in occupation; components and contributions to adaptation and coping.

#### 650 Development of Adaptive Skills (4, Fa)

Critical analysis of occupation as means and product of human adaptation. Adaptive skill development from traditional and occupational science approaches. Research methods and results.

**651** Adaptation and Disability (4, Sp) Social and cultural adaptation to disabilities and stigmatized medical conditions through anthropological studies of groups and individuals. Training in ethnographic methods with such populations. (Duplicates credit in former OT 551.)

#### 653 Play and Occupation (4, 2 years, Sp)

Major conceptual, theoretical, and empirical studies of play; development and organization of play in relation to occupation; research on play as occupation. (Duplicates credit in former OT 553.)

**655** Work and Leisure (4, Sp) Ontogenesis and phylogenesis of work and leisure. Systems view of person/environmental interactions affecting competence and satisfaction with activity. Occupation and the need for mastery.

**660abcd Research Practicum in Occupation (1-1-1-1, FaSp)** Supervised research in current problems and issues in occupation.

Graded CR/NC. Open only to OT majors. 686 Residency (6 or 12, max 24, FaSpSm)

Residency involving development, administration, evaluation, or policy formulation for occupation-centered programs in clinical or community settings. Development of portfolio for professional doctorate. Open to OT majors only. Graded CR/NC.

**790 Research (1-12)** Research leading to the doctorate. Maximum units which may be applied to the degree to be determined by the department. Graded CR/NC. Open only to OT majors.

**794abcdz Doctoral Dissertation (2-2-2-0, FaSp)** Credit on acceptance of dissertation. Graded IP/CR/NC. Open only to OT majors.