

# USC Davis School of Gerontology

At the USC Davis School of Gerontology, students study the human lifespan by exploring all dimensions of adult life. They enhance their learning through volunteer work, research opportunities and internships with local organizations, national institutes and international partners.

The USC Davis School of Gerontology explores all aspects of human development and aging. Course work and research opportunities in biology, psychology, sociology, policy and aging services make up its multidisciplinary curriculum.

Founded in 1975, USC Davis is not only the nation's premier school of gerontology, it is also the first. Named in honor of Leonard Davis, a philanthropist and businessman who pioneered insurance plans for the elderly through his involvement in AARP and his own company Colonial Penn Life Insurance, the school provides ground-breaking solutions to issues facing an aging population.

USC Davis is committed to providing students with a broad theoretical understanding of lifespan development as well as dynamic post-graduate career placement. Students on all levels often enroll in semester-long internship programs. Working with our internship director, students can apply their gerontological knowledge to an array of industries such as health, medicine, business, finance, policy, direct services, program development, counseling and many other fields.

USC Davis School's Bachelor of Science degrees can be pursued with a health science, a social science or a global emphasis. The school also offers four master's degrees, seven dual master's programs, a graduate certificate, and Ph.D. programs in gerontology as well as in the biology of aging.

The school's research and services arm is the Ethel Percy Andrus Gerontology Center. The center houses the California Center for Long Term Care Integration, the Fall Prevention Center of Excellence, the Long Beach Longitudinal Study, the Society for the Study of Social Biology, the USC/UCLA Center on Biodemography and Population Health, and the Los Angeles Caregiver Resource Center.

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## Administration

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Kelvin J.A. Davies, Ph.D., *D.Sc.*, *Vice Dean and Director of the Ethel Percy Andrus Gerontology Center*

Maria Henke, M.A., *Associate Dean, USC Davis School of Gerontology*

## Faculty

*William and Sylvia Kugel Dean's Chair in Gerontology:*  
Pinchas Cohen, M.D.

*AARP University Chair in Gerontology:* Eileen Crimmins, Ph.D.\*

*ARCO/William F. Kieschnick Chair in the Neurobiology of Aging:* Caleb E. Finch, Ph.D.\*

*James E. Birren Chair in Gerontology:* Kelvin J.A. Davies, Ph.D., D.Sc.\*

*The Golden Age Association/Frances Wu Chair in Chinese Elderly:* Iris Chi, Ph.D. (Social Work)

*Edna M. Jones Chair in Gerontology:* Valter D. Longo, Ph.D.

*Rita and Edward Polusky Chair in Education and Aging:* Elizabeth M. Zelinski, Ph.D.\*

*UPS Foundation Chair in Gerontology:* Jon Pynoos, Ph.D.\*

*Mary Pickford Foundation Professor of Gerontology:* Kathleen H. Wilber, Ph.D.\*

*Albert L. and Madelyne G. Hanson Family Trust Assistant Professor:* Susan H. Enguidanos, Ph.D.\*

*Professors:* Kathleen Chambers, Ph.D. (Psychology); Margaret Gatz, Ph.D. (Psychology); Martin Levine, Ph.D. (Law, Psychiatry and the Behavioral Sciences); Mara Mather, Ph.D.; John J. McArdle, Ph.D. (Psychology); Michal Mor-Barak, DSW (Social Work); Roseann Mulligan, DDS (Dentistry); Robert C. Myrtle, DPA (Public Policy); Mike Nichol, Ph.D. (Pharmacy and Public Policy); Christian Pike, Ph.D.; Victor Regnier, M.Arch. (Architecture); Edward L. Schneider, M.D.; Lon Schneider, M.D. (Psychiatry and Neurology); John Tower, Ph.D. (Biological Sciences); Bradley R. Williams, Pharm.D. (Clinical Pharmacy)

*Associate Professors:* Maria Aranda, Ph.D. (Social Work); Loren G. Lipson, M.D. (Medicine); Jeffrey McCombs, Ph.D. (Pharmacy); John P. Walsh, Ph.D.\*

*Assistant Professors:* Cleopatra Abdou, Ph.D.; Sean Curran, Ph.D.\*; Tara Lynn Gruenewald, Ph.D.; Natalie Leland, Ph.D. (Occupational Therapy); Ana Marie Yamada, Ph.D. (Social Work)

*Research Professors:* Todd Morgan, Ph.D.; Albert Rizzo III, Ph.D.

*Research Associate Professors:* Gennady Ermak, Ph.D.; Roseann Giarrusso, Ph.D.; Jung Ki Kim, Ph.D.

*Research Assistant Professors:* Donna Benton, Ph.D.; Thomas Parsons, Ph.D.

*Adjunct Professors:* Neal Cutler, Ph.D.; Fernando Torres-Gil, Ph.D.\*

*Adjunct Associate Professors:* Joanna Davies, Ph.D.; Monika White, Ph.D.

*Adjunct Research Professor:* Larry Rubenstein, Ph.D.

*Adjunct Research Assistant Professor:* Tracy Armstrong, Ph.D.

*Adjunct Clinical Professor:* Robert M. Tager, M.D.

*Clinical Professor:* Anne Katz, Ph.D.

*Clinical Associate Professors:* Raquel D. Arias, M.D.; Michael Gilewski, Ph.D.; Carl Renold, Ph.D.; Debra Sheets, Ph.D.

*Clinical Assistant Professors:* Aaron Hagedorn, Ph.D.; Freddi Segal-Gidan, Ph.D.

*Emeritus Professors:* Vern Bengtson, Ph.D.; James E. Birren, Ph.D.; Gerald A. Larue, Ph.D.

*Emeritus Associate Professor:* Phoebe Liebig, Ph.D.

\* *Recipient of university-wide or college teaching award.*

## Programs

The Davis School of Gerontology offers a Bachelor of Science in Human Development and Aging, a Bachelor of Science in Lifespan Health, undergraduate classes through the health and humanity major in the USC Dornsife College of Letters, Arts and Sciences, two minors in aging and a progressive Master of Science in Gerontology open to all undergraduate students.

The School of Gerontology offers several graduate degrees including: a Master of Science in Gerontology; a Master of Aging Services Management; a Master of Arts in Gerontology; a Master of Long Term Care Administration (with the Marshall School of Business and the Price School of Public Policy). All master's degrees are offered online and onsite. The School of Gerontology offers the premiere Ph.D. in Gerontology program in the nation. The program is not offered online. The school also offers a Ph.D. in the Biology of Aging. Non-degree graduate students may complete 16 units of gerontology and be awarded a graduate level certificate in gerontology (also available online).

Master's degree students may pursue one of several dual degrees, which are jointly offered with other professional schools. These are the Master of Science in Gerontology and the Master of Business Administration (M.S./MBA) with the Marshall School of Business; the Master of Science in Gerontology and the Juris Doctor (M.S./J.D.) with the Gould School of Law; the Master of Science in Gerontology and the Master of Public Administration (M.S./MPA), the Master of Science in Gerontology and the Master of Health Administration (M.S./MHA), and the Master of Science in Gerontology and the Master of Planning (M.S./MPL) with the Price School of Public Policy; the Master of Science in Gerontology and the Master of Social Work (M.S./MSW) with the School of Social Work; and the Master of Science in Gerontology and the Doctor of Pharmacy (M.S./Pharm.D.) with the School of Pharmacy.

In addition to the degree and minor programs, overview courses in aging are offered for undergraduates enrolled in other units of the university. Many gerontology courses can be credited as elective units.

## Honor Society

The student honor society is Sigma Phi Omega, the national honor society formed in 1980 to recognize the excellence of those who study gerontology. The organization seeks to promote scholarship and professionalism, and to recognize exemplary attainment in the field of aging. Undergraduates must have a GPA of at least 3.3 and graduate students a GPA of at least 3.5. Sigma Phi Omega is administered by the Association for Gerontology in Higher Education, an educational unit of the Gerontological Society of America.

## Ethel Percy Andrus Gerontology Center

The Andrus Gerontology Center initiates, designs and executes basic and applied research on the many phases of development and aging, and provides for graduate and post-graduate training in the biological, social, behavioral and policy sciences. Specific areas of study include neurobiology, cognitive science, biology, social organization behavior, human service delivery, biodemography and social policy.

The Andrus Center offers a multidisciplinary research training program in gerontology. It is directed toward graduate students pursuing the Ph.D. as well as a limited number of post-doctoral fellows who develop research and academic careers in specialized areas of gerontology.

Research training is carried out within individual disciplines.

## Undergraduate Programs

### Bachelor of Science in Human Development and Aging

The Bachelor of Science in Human Development and Aging is an undergraduate degree offered at the USC Davis School of Gerontology in the social sciences. Students in this program often pursue careers related to older adults in business, law, the nonprofit sector or government agencies.

Students may also specialize in a health science track. The health science track combines the core gerontology curriculum with the prerequisites for admission to medical school and other health-related fields including: dentistry, pharmacy, occupational/physical therapy, physician assistant programs and others. In addition, students will participate in a supervised practicum experience in which they will become directly involved with aging clients in a health care setting.

Students planning to pursue a B.S. are urged to notify the school of this intent as early as possible during their undergraduate study. This will help ensure that the student receives proper advisement and that the student is alerted to any special requirements or program modifications.

During the freshman and sophomore years, students enroll primarily in general education required courses as specified by the university and the Human Development and Aging gateway course (GERO 200).

During their junior and senior years, students enroll in required and elective courses in the School of Gerontology as well as other courses throughout the university. These courses are selected in consultation with an adviser and reflect the personal and professional interests of the students.

The honors program is available to juniors who maintain a GPA of 3.5 in gerontology and a GPA of 3.3 in other USC course work. The honors program includes mentored training in research and course work relevant to research methodology and statistics.

A grade point average of at least C (2.0) on all units attempted at USC is required for undergraduate degrees. The School of Gerontology requires a minimum 2.0 grade point average in upper division courses applied toward the major.

#### General Education Requirements

The university's general education program provides a coherent, integrated introduction to the breadth of knowledge you will need to be considered a generally well-educated person. This program requires six courses in different categories, plus writing and diversity requirements, which together comprise the USC Core. See The USC Core and the General Education Program for more information.

#### Foreign Language or Programming Skills (12 Units)

Students must satisfy the skill level requirement in one language or complete ITP 101X and additional ITP 100-level programming courses to total 12 units. Students in the health science track are required to complete only ITP 101X.

#### Degree Requirements

REQUIRED COURSES		UNITS
GERO 200	Gerontology: The Science of Adult Development	4
GERO 320	Psychology of Adult Development	4
GERO 330	Society and Adult Development	4
GERO 340	Policy, Values, and Power in an Aging Society	4
GERO 350	Administrative Problems in Aging	4
GERO 416	Health Issues in Adulthood	4
GERO 481	Case Management for Older Adults	4
GERO 491	Practicum	4
GERO 492	Senior Seminar	4
General Education		24
Writing Requirement		8
Foreign Language or Programming		12
Gerontology electives		12
One approved statistics course		4
General electives in gerontology or related disciplines (8 units upper division)		32

Total: 128

Recommended general Electives		Units
ANTH 305	Childhood, Birth and Reproduction	4
HP 402	Maternal and Child Health	4
LING 405	Child Language Acquisition	4
PSYC 100	Introduction to Psychology	4
PSYC 336L*	Developmental Psychology	4
PSYC 437*	Adolescent Development	4
SOCI 305	Sociology of Childhood	4
SOCI 369	The Family in a Changing Society	4
SOCI 385	Population, Society, and Aging	4

\* Prerequisite required.

#### Health Science Track in Human Development and Aging

##### Requirements for Admission

The listed requirements for admission to the health science track in human development and aging will not differ from existing requirements for admission to the Bachelor of Science in Human Development and Aging. However, because health professional schools are very competitive, USC students interested in this program will be expected to have achieved at least a 3.0 grade point average (A = 4.0). Students entering the program from high schools or transferring from community colleges will also be expected to meet the minimum admission standards.

#### Degree Requirements

SCIENCE AND MATHEMATICS		UNITS
BISC 120Lx	General Biology: Organismal Biology and Evolution	4
BISC 220L	General Biology: Cell Biology and Physiology	4
CHEM 105abL*	General Chemistry	4-4
CHEM 322abL*	Organic Chemistry	4-4
MATH 125*	Calculus I	4
PHYS 135abL*	Physics for the Life Sciences	4-4
		36
GERONTOLOGY UPPER DIVISION CORE COURSES		UNITS
GERO 310*	Physiology of Aging	4
GERO 320	Psychology of Adult Development, or	4
GERO 330	Society and Adult Development	4
GERO 340	Policy, Values, and Power in an Aging Society	4
GERO 414*	Neurobiology of Aging	4

GERO 495	Practicum in Geriatric Care	4
		20
ADDITIONAL REQUIREMENTS		UNITS
ITP 101X	Introduction to Information Technology	4
General Education		24
Writing Requirement		8
Gerontology upper division electives		12
General electives in gerontology or related disciplines (8 units upper division)		24
		72
Total: 128		

Recommended GENERAL Electives		Units
ANTH 305	Childhood, Birth and Reproduction	4
BISC 480*	Developmental Biology	4
HP 402	Maternal and Child Health	4
LING 405	Child Language Acquisition	4
PSYC 100	Introduction to Psychology	4
PSYC 336L*	Developmental Psychology	4
PSYC 437*	Adolescent Development	4
SOCI 305	Sociology of Childhood	4
SOCI 369	The Family in a Changing Society	4
SOCI 385	Population, Society, and Aging	4

\* Prerequisite required.

#### Honors Program in Human Development and Aging

USC Davis offers an honors program to outstanding students already pursuing studies for the B.S. in Human Development and Aging degree. This program offers students an opportunity to participate in mentored undergraduate research, taking course work in research methods and statistics in aging, and experience in writing an honors thesis that summarizes the research project. Honors students are required to complete GERO 497abc for a total of 6-8 units, beginning in the fall or spring of the junior year. In the senior year, they must complete GERO 593 Research Methods with a minimum grade of B. GERO 593 is offered only in the fall semester. Completion of the program requires a minimum GPA of 3.5 in gerontology and 3.3 in other courses. The program leads to the designation on the transcript of Bachelor of Science in Human Development and Aging with Honors.

The student takes 2 units of GERO 497a in the fall or spring of the junior year as a mentored research course to begin the process of developing an honors thesis. This would be in lieu of elective units. In the fall of the junior or senior year the student would complete GERO 593 for 4 units and 2 units of GERO 497b, both in lieu of elective units. Also during the fall semester, the research design and methods for the honors thesis are finalized and the research project begun. In the spring, the student would register for 2-4 units of GERO 497c in lieu of elective units. The goal for that semester is to complete the research and write the honors thesis.

#### Degree Requirements

REQUIRED COURSES		UNITS
GERO 200	Gerontology: The Science of Adult Development	4
GERO 320	Psychology of Adult Development	4
GERO 330	Society and Adult Development	4
GERO 340	Policy, Values, and Power in an Aging Society	4
GERO 350	Administrative Problems in Aging	4
GERO 416	Health Issues in Adulthood	4
GERO 481	Case Management for Older Adults	4
GERO 491	Practicum	4
GERO 492	Senior Seminar	4
General Education		24
Writing Requirement		8
Foreign Language or Programming		12

Gerontology electives	12
One approved statistics course	4
Electives in gerontology and related disciplines	20-22
	116-
	188
<b>GERONTOLOGY HONORS COURSES</b>	<b>UNITS</b>
GERO Honors Seminar	2, 2, 2-
497abc*	4
GERO 593 Research Methods	4
	10-12
Total: 128	

### Requirements for Completion of the Health Science Honors Track

SCIENCE AND MATHEMATICS		UNITS
BISC 120LX	General Biology: Organismal Biology and Evolution	4
BISC 220L	General Biology: Cell Biology and Physiology	4
CHEM 105abl*	General Chemistry	8
CHEM 322abl*	Organic Chemistry	8
MATH 125*	Calculus I	4
PHYS 135abl*	Physics for the Life Sciences	8
		36

GERONTOLOGY UPPER DIVISION CORE COURSES		UNITS
GERO 310*	Physiology of Aging	4
GERO 320	Psychology of Adult Development, or	
GERO 330	Society and Adult Development	4
GERO 340	Policy, Values and Power in an Aging Society	4
GERO 414*	Neurobiology of Aging	4
GERO 495	Practicum in Geriatric Care	4
		20

ADDITIONAL REQUIREMENTS		UNITS
ITP 101X	Introduction to Information Technology	4
General Education		24
Writing Requirement		8
Gerontology upper division electives		8
Electives in gerontology and related disciplines		16-18
		60-62

GERONTOLOGY HONORS COURSES		UNITS
GERO Honors Seminar		2, 2, 2-
497abc*		4
GERO 593 Research Methods		4
		10-12

Total: 128

\* Prerequisite required.

## Bachelor of Science in Lifespan Health

The Bachelor of Science in Lifespan Health prepares students for admission to a graduate or professional school with an emphasis on the biomedical aspects of health including disease prevention, detection and treatment. This program is designed for students wishing to pursue graduate studies in a health field such as medicine, pharmacy, occupational/physical therapy, psychology and other related fields.

Admission to this program is granted through USC's admission process, described in the admission section of this catalogue. The same foreign language requirement for the B.S. in Human Development and Aging is required as well as the USC Core (see The USC Core and the General Education Program for more information). Students must enroll in the following courses:

Gerontology Required Courses		Units
GERO 200	Gerontology: The Science of Adult Development	4
GERO 310*	Physiology of Aging	4

GERO 320	Psychology of Adult Development	4
GERO 416	Health Issues in Adulthood	4
GERO 483	Global Health and Aging	4
GERO 492	Senior Seminar	4
GERO 495	Practicum in Geriatric Care	4
Choose three from the following four courses:		
GERO 414*	Neurobiology of Aging	4
GERO 437**	Social and Psychological Aspects of Death and Dying	4
GERO 475	Ethical Issues in Geriatric Care	4
GERO 481	Case Management for Older Adults	4
Electives		32
Gerontology electives		12

\* Prerequisite required.

\*\* GERO 437 must be taken for 4 units of credit

## Bachelor of Arts in Health and Humanity

The USC Davis School of Gerontology offers undergraduate classes through the Health and Humanity major in the USC Dornsife College of Letters, Arts and Sciences (see the Health and Humanity page).

### Progressive Degree in Gerontology/Master of Science in Gerontology

The progressive degree program allows high performing students to integrate their current undergraduate major with a Master of Science in Gerontology. Students with at least a 3.0 overall GPA may apply for admission to the degree program in their junior year.

Students will meet with the gerontology student adviser to develop a course plan that must be approved by the School of Gerontology and the student's home department. Students admitted into the progressive degree program begin taking master's level courses in their senior year and will complete the master's degree in year five. For more information on the admission process, see the gerontology student adviser. For further details on progressive degree programs, see the Requirements for Graduation page.

### Minors in Aging

The undergraduate minor program gives students the option of combining their major with an emphasis in gerontology, the study of aging. The minors provide students with the opportunity to supplement their education with a life course perspective of aging processes.

The minor programs, which are multidisciplinary in nature, allow the student to survey the sociological, political, psychological and biological aspects of aging; to gain an understanding of the current services available to older persons; and to examine the contemporary policy issues facing the field.

#### Individuals, Societies and Aging

This minor is a fit for students in business, engineering, communication, cinematic arts, or arts and sciences interested in developing a broad knowledge of issues in aging. Based largely on disciplines in the behavioral and social sciences, students learn how aging will impact their lives, families and careers. Upon completion of 20 units and graduation, the minor is noted on the student's transcript.

Required courses		Units
GERO 320	Psychology of Adult Development	4
GERO 330	Society and Adult Development	4
GERO 340	Policy, Values, and Power in an Aging Society	4
Select two from the following:		
GERO 380	Diversity in Aging	4
GERO 416	Health Issues in Adulthood	4
GERO 435	Women and Aging: Psychological, Social and Political Implications	4
GERO 437	Social and Psychological Aspects of Death and Dying	4
GERO 481	Case Management for Older Adults	4
GERO 491	Practicum	4
		20

### Science, Health and Aging

The science, health and aging minor is appropriate for students working toward careers in medicine, dentistry, pharmacy, biological sciences, public health or other health related fields. Admission to the minor is only available to students who have completed 4 units of prerequisites (BISC 220L or BISC 221L) as part of their major requirements. Upon completion of 20 units and graduation, the minor is noted on the student's transcript.

Required courses		Units
GERO 310	Physiology of Aging	4
GERO 414	Neurobiology of Aging	4
GERO 416	Health Issues in Adulthood, or	
GERO 496	Introduction to Clinical Geriatrics	4
Select two from the following:		
GERO 415	Neuroaffective Disorders of Aging	4
GERO 421	Managed Care for an Aging Society	4
GERO 437	Social and Psychological Aspects of Death and Dying	4
GERO 475	Ethical Issues in Geriatric Health Care	4
GERO 495	Practicum in Geriatric Care	4
		20

## Graduate Degrees

### Master's Degrees in Gerontology

#### Master of Science in Gerontology

The Master of Science in Gerontology prepares graduates to assume major leadership roles in the field of aging, primarily in the planning, administration and evaluation of programs in the private and public sectors, as well as executive positions in the delivery of direct services to older people and their families and in the instruction of older adults and service providers. The Master of Science in Gerontology requires 44 units of course work. This includes 32 units of required courses and 12 units of electives. As part of this curriculum, a field practicum assures that these skills can be applied in agencies and institutional settings.

All students take core courses in physiological, psychological, sociological, social policy and professional issues relating to aging, as well as research methods and the capstone course.

The course work includes instruction on the processes of aging and professional courses designed to develop the skills needed for practice. The field practicum includes one or two semesters of practical experience working in an organizational setting.

Continuous registration in the program is required. There is a five year completion time limit for the degree. Leaves of absence are available for limited times and are

excluded from the total time limit. A maximum of two absences (one year each) is allowed. Most courses are offered on campus and online.

#### Prerequisites for Admission

Students applying for admission to the Master of Science in Gerontology program must have a bachelor's degree from an accredited college or university. In selecting applicants for admission, the School of Gerontology considers both academic potential (as reflected in undergraduate study or scores on the Graduate Record Examinations) and professional potential (as reflected in experience, references and career goals). The school requests information from applicants to supplement that supplied by the USC Application for Graduate Admission. Such supplemental information usually includes a resume, statement of interest in gerontology and letters of reference. Interviews may be required.

#### Probation and Disqualification

**Probation and Warning:** Any graduate student whose cumulative or semester grade point average in the university falls below B (3.0) will be placed on academic probation. A graduate student whose semester average falls below B (3.0) but whose cumulative grade point average in the university is 3.0 (A = 4.0) or higher will be placed on academic warning.

**Disqualification:** A graduate student on academic probation will be disqualified if his or her cumulative record accumulates more than 12 units of C work. A graduate student, whether on probation or not, will be subject to disqualification if the Student Affairs Committee of the USC Davis School at any time determines deficiency in academic achievement.

#### Common Requirements

All candidates for the Master of Science degree must complete the following common requirements:

Required Courses		Units
GERO 510	Physiology of Development and Aging	4
GERO 520	Life Span Developmental Psychology	4
GERO 530	Life Span Developmental Sociology	4
GERO 540	Social Policy and Aging	4
GERO 589	Case Studies in Leadership and Change Management	4
GERO 591	Field Practicum	4
GERO 593	Research Methods	4
		28
<b>Capstone Course</b>		
GERO 555	Integrating Gerontology: A Multidisciplinary Approach	4
<b>Suggested Electives (12 Units)</b>		
GERO 522	Counseling Older Adults and Their Families	4
GERO 543	Continuum of Care: A Systems Perspective	4
GERO 550	Administration and System Management in Programs for Older Adults	4
GERO 551	Applied Policy Skills in Aging	4
GERO 554	Evaluation: Incorporating Evidence-Based Practices	4
GERO 591	Field Practicum	4

Common requirements for all programs include the 28 required units and GERO 555, totaling 32 units. In addition, each candidate must complete the 12 units of electives chosen from the complete list of electives approved by the student's adviser.

#### Field Practicum

The field practicum provides the opportunity for the student to gain valuable experience and develop needed skills by working in a community agency or institution. It involves a minimum of 240 hours of involvement. Students may elect to take an additional 4 units of GERO 591 Field Practicum as an elective.

Field placement assignments are made by the internship coordinator of the school in consultation with the student and in accordance with the resources available in the community. Every effort is made to secure placement which will reflect the student's capacity to assume the responsibilities of a professional in gerontology. Evaluations of the student's performance are sent to the school by the community agency; the student receives a grade of credit/no credit in GERO 591 Field Practicum.

#### Master of Science with Specialization in the Health Service Area and Ambulatory Care Certificate

In addition to the 32 units of common requirements for the M.S. in Gerontology, the following courses are required to earn the certificate.

Core courses		Units
PPD 509	Problems and Issues in the Health Field	4
PPD 510a	Financial Management of Health Services, or	
PPD 516	Financial Accounting for Health Care Organizations	4
PPD 545	Human Behavior in Public Organizations, or	
PPD 557	Modeling and Operations Research	4
	Elective	4
		16
one specialized course from the following:		
GERO 550	Administration and System Management in Programs for Older Adults	4
PPD 600	Management of Managed Care Organizations	4
PPD 601	Management of Long-Term Care Organizations	4

#### Advanced Placement Master of Science in Gerontology

The Advanced Placement M.S. program allows the outstanding student who has completed a Bachelor of Science in Gerontology to waive several courses in order to complete the master's degree in 36 units rather than the 44 units for the regular program.

Required courses		Units
GERO 510	Physiology of Development and Aging, or	
GERO 520	Life Span Developmental Psychology, or	
GERO 530	Life Span Developmental Sociology, or	
GERO 540	Social Policy and Aging	4
GERO 555	Integrating Gerontology: A Multidisciplinary Approach	4
GERO 591	Field Practicum	8
GERO 593	Research Methods	4
	Gerontology skill requirements	12
	Gerontology electives	4
		36

#### Program Adaptation

Three of the following courses, GERO 510, GERO 520, GERO 530 and GERO 540, will be waived for students in the advanced placement track. Advanced placement

students admitted to dual degree programs must meet curriculum requirements for the respective programs.

#### Progressive Degree in Gerontology

A progressive degree program allows qualified undergraduate students the opportunity to complete an integrated program of study joining a bachelor's degree and a master's degree in the same or different departments.

The progressive degree program in gerontology allows students in their junior year to apply for the Master of Science in Gerontology program and complete both degrees in five years. Students must fulfill all the requirements for both the bachelor's degree and the master's degree. The total number of units for the master's degree, however, may be reduced by a maximum of one third. Students must obtain permission from both the bachelor's degree granting program and the USC Davis School of Gerontology. This program may be particularly attractive to students majoring in biology, psychology, policy and sociology. For more information on progressive degrees, see the entry under Undergraduate Programs or Graduate and Professional Education.

#### Master of Aging Services Management

The Master of Aging Services Management provides an opportunity for those seeking careers in the aging services industries to acquire skills and knowledge related to management of services, products and programs for older persons. The program requires a minimum of 12 units of core courses (three courses) and 20 units of electives (five courses). All graduate level courses are offered on campus and via the Internet. Continuous registration in the program is required. Leaves of absence are available for limited times and are excluded from the total time.

In order to participate in online courses, students will be required to have access to a computer with multimedia capability including a modem, printer and CD-ROM drive; an Internet provider with email and an Internet browser; and word processing software. Specific details regarding the computer requirements will be provided by the department. This program is available as a progressive degree (see Progressive Degree in Gerontology).

Students applying to the Master of Aging Services Management must have a bachelor's degree from an accredited college or university with a GPA of 3.0. If the applicant's GPA falls below 3.0 the GRE will be required.

Students must choose a minimum of 12 units of core courses from the following:

Core Courses (minimum of 12 Units)		Units
GERO 500	Perspectives on a Changing Society: An Introduction to Aging	4
GERO 501	Applied Legal and Regulatory Issues in Aging	4
GERO 502	Marketing and Shifts in Consumer Decision Making	4
GERO 504	Current Issues in Aging Services Management	4
GERO 589	Case Studies in Leadership and Change Management	4

Students must select up to five courses (for a total of 20 units) from the following courses or any other adviser-approved elective:

Suggested elective courses (20 units)		Units
GERO 505	Behavioral and Social Consequences of Design and Environment	4
GERO 506	Technological Innovations in Aging (Gerontechnology)	4
GERO 507	End of Life Care	4
GERO 508	The Mind and Body Connection	4

	through the Lifespan	
GERO 510	Physiology of Development and Aging	4
GERO 520	Life Span Developmental Psychology	4
GERO 522	Counseling Older Adults and Their Families	4
GERO 530	Life Span Developmental Sociology	4
GERO 540	Social Policy and Aging	4
GERO 541	Health Care Delivery Models: Comparative Approaches	4
GERO 543	Continuum of Care: Systems Perspective	4
GERO 550	Administration and Systems Management in Programs for Older Adults	4
GERO 551	Applied Policy Skills in Aging	4
GERO 554	Evaluation: Incorporating Evidence-Based Practices	4
GERO 560	Micronutrients, Health, and Longevity	4
GERO 585	The Aging Family	4
GERO 593	Research Methods	4
Total:		20

### Master of Arts in Gerontology

The M.A. in Gerontology provides an opportunity to acquire skills and formal training in gerontology. The online program requires 28 units of course work. Most courses are offered online and on campus.

Continuous registration in the program is required. Leaves of absence are available for limited times and are excluded from the total time limit.

In order to participate in the online courses, students will be required to have access to a multimedia computer with modem, printer and CD-ROM drive; an Internet provider with email and an Internet browser; and word processing software. Specific details regarding the computer requirements will be provided by the department.

Admission standards and prerequisites are the same as listed for the Master of Science in Gerontology with the exception that students in the online M.A. program are expected to have a significant amount of experience working in human services, health care, business or similar settings. Students are not required to have taken an approved additional course.

Required courses (20 Units)		Units
GERO 500	Perspectives on a Changing Society: An Introduction to Aging	4
GERO 508	The Mind and Body Connection through the Lifespan	4
GERO 520	Life Span Developmental Psychology	4
GERO 530	Life Span Developmental Sociology	4
GERO 540	Social Policy and Aging	4
		20

Students must select two courses (for a total of 8 units) from the following courses:

Elective courses (8 units)		Units
GERO 522	Counseling Older Adults and Their Families	4
GERO 550	Administration and System Management in Programs for Older Adults	4
GERO 560	Micronutrients, Health, and Longevity	4
GERO 585	The Aging Family	4
GERO 589	Case Studies in Leadership and Change Management	4
Total:		28

### Graduate Level Certificate in Gerontology

The residential graduate certificate in gerontology program provides an opportunity for those who have completed a bachelor's degree in another profession or discipline and are employed in the field of aging to acquire a greater understanding of gerontology theory and research. The program consists of 16 units of gerontology content designed to familiarize the student with several areas of the field which relate to professional practice.

In addition to three of the four required core course areas for the certificate program (GERO 510, GERO 520 or GERO 522, GERO 530 or GERO 585, GERO 540), each student will have the option to choose one elective course which meets his or her particular area of interest.

Certificate students do not take a field practicum. Students admitted to the non-degree certificate program are expected to enroll each semester until the program is completed.

### Online Graduate Level Certificate in Gerontology

The online graduate certificate in gerontology program provides an opportunity for those with a bachelor's degree in another profession or discipline who are employed in the field of aging to acquire a greater understanding of gerontology theory and research. The program consists of 16 units of gerontology courses designed to familiarize the student with several areas of the field which relate to professional practice.

Students complete the introductory course, GERO 500, two of the four required core course areas (GERO 508 or GERO 510 or, GERO 520 or GERO 522, GERO 530 or GERO 585, and GERO 540), and one elective course in a particular area of interest.

The required courses are delivered via the Internet. The courses are offered in sequential order and are restricted by availability. Continuous registration in the non-degree program is required. Leaves of absence are available for limited times and are excluded from the total time limit. Entering students are encouraged to begin their course of study by taking GERO 500.

In order to participate in the online courses, students will be required to have access to a multimedia computer with modem, printer and CD-ROM drive; an Internet provider with email and an Internet browser; and word processing software. The department will provide specific details regarding the computer requirements.

### Master of Long Term Care Administration

The Master of Long Term Care Administration provides an opportunity for professionals who are currently working in a long term care profession to acquire skills and formal training in long term care administration. The online program requires 28 units of course work.

The required courses are in sequential order and are restricted by availability. Continuous registration in the program is required. Leaves of absence are available for limited times and are excluded from the total time limit.

In order to participate in the online courses, students will be required to have access to a multimedia computer with modem, printer and CD-ROM drive; an Internet provider with email and an Internet browser; and word processing software. Specific details regarding the computer requirements will be provided by the department.

Admission standards are the same as for the Master of Science in Gerontology.

### Transfer Credits

An admission credit evaluation is prepared for graduate students with previous graduate level course work. This review indicates which courses the university will approve but it is the relevant school (Gerontology, Business, or Public Policy) that determines if any of these courses are appropriate for this degree. A maximum of 4 units may be used toward the master's degree.

Graduate transfer credit will not be granted for life experience, credit by examination, non-credit extension courses, correspondence courses or thesis supervision. Graduate transfer credit will not be granted for any course work taken elsewhere after the student has been admitted and enrolled at USC unless the student receives prior written approval from the department.

Required Courses (24 units)		Units
ACCT 509	Concepts of Financial and Management Accounting	4
FBE 587	Legal and Regulatory Environment of Long Term Care	4
GERO 500	Perspectives on a Changing Society: An Introduction to Aging	4
GERO 508	The Mind and Body Connection through the Lifespan, or	
GERO 522	Counseling Older Adults and Their Families	4
PPD 601	Management of Long-Term Care Organizations	4
PPD 649	Concepts and Practices in Public Personnel Administration	4

Students must select one course (for a total of 28 units) from the following courses.

Elective Course (4 units)		Units
GERO 520	Life Span Developmental Psychology	4
GERO 530	Life Span Developmental Sociology	4
GERO 540	Social Policy and Aging	4
GERO 589	Case Studies in Leadership and Change Management	4

### Pharm.D./Graduate Certificate in Gerontology

This integrated program in pharmacy and gerontology prepares students with an interest in geriatric pharmacy to assume leadership roles at academic, administrative or policy levels within the profession.

The program involves the completion of 16 units of core courses in physiology, psychology, sociology and social policy aspects of aging offered by the School of Gerontology. In addition, students are required to complete 8 units of approved elective courses in gerontology or geriatric pharmacy to be credited toward the requirements for the Pharm.D. and the Graduate Certificate in Gerontology.

Required courses in gerontology		Units
GERO 508	The Mind and Body Connection through the Lifespan, or	
GERO 510	Physiology of Development and Aging	4
GERO 520	Life Span Developmental Psychology, or	
GERO 522	Counseling Older Adults and Their Families	4
GERO 530	Life Span Developmental Sociology, or	
GERO 585	The Aging Family	4
GERO 540	Social Policy and Aging	4
		16
Electives in gerontology and geriatric pharmacy (8 Units)		Units
GERO 554	Evaluation: Incorporating Evidence-	4

Based Practices		
GERO 555	Integrating Gerontology: A Multidisciplinary Approach	4
PHRD 655	Geriatric Pharmacy I	3
PHRD 656	Geriatric Pharmacy II	3
PHRD 703	Long Term Care Clerkship	6
PHRD 706	Geriatrics Clerkship	6
PHRD 730	Acute Care Geriatrics Clerkship	6
PHRD 731	Advanced Geriatrics APPE	6

It is expected that the program can be successfully completed by candidates taking electives in geriatric pharmacy or gerontology during the regular semester and completing one core course in gerontology during each summer in the four year Pharm.D. program.

#### Admission Requirements

Students who have a baccalaureate degree from an accredited college or university must submit separate applications to the USC School of Pharmacy and the USC Davis School of Gerontology. All requirements for admission to the regular Pharm.D. program must be fulfilled by the candidate. GRE scores are not required for admission to the certificate program.

## Graduate Degrees

### Dual Degree Programs

The USC Davis School of Gerontology cooperates with six other professional schools at USC in offering programs in which the student receives two master's degrees. These degrees provide the student with the knowledge and skills of gerontology as well as those of the other professional field. The dual degrees require more course work than the M.S. alone, but offer the graduate greater breadth of education and employment options.

Dual degrees currently available are the Master of Science in Gerontology and the Master of Business Administration (M.S./MBA) with the Marshall School of Business; the Master of Science in Gerontology and the Juris Doctor (M.S./J.D.) with the Gould School of Law; the Master of Science in Gerontology and the Master of Public Administration (M.S./MPA), the Master of Science in Gerontology and the Master of Health Administration (M.S./MHA), and the Master of Science in Gerontology and the Master of Planning (M.S./MPI) with the Price School of Public Policy; the Master of Science in Gerontology and the Master of Social Work (M.S./MSW) with the School of Social Work; and the Master of Science in Gerontology and the Doctor of Pharmacy (M.S./Pharm.D.) with the School of Pharmacy. Students must apply to both schools simultaneously and, if accepted to both, participate in specially designed programs combining the courses of each school.

#### Admission to Dual Degree Programs

Applicants to any of the dual degree programs must submit two application forms to the Office of Admissions; one indicating gerontology as the major and one indicating the other degree as the major. Each of the schools must accept the student for admission. Acceptance into one school's degree program does not imply acceptance into the dual degree program.

#### Gerontology and Business Administration

The M.S./MBA dual degree combines knowledge of the older population with the skills of business management. The program prepares graduates for a number of roles in both public and private sector organizations including the marketing of products or services to seniors, human

resource development with older workers and retirement benefits.

#### Gerontology Requirements

The Master of Science in Gerontology requires 30 units of course and fieldwork which covers the core content of the M.S. program.

Required courses		Units
GERO 510	Physiology of Development and Aging	4
GERO 520	Life Span Developmental Psychology	4
GERO 530	Life Span Developmental Sociology	4
GERO 540	Social Policy and Aging	4
GERO 555	Integrating Gerontology: A Multidisciplinary Approach	4
GERO 591	Field Practicum	4
Gerontology electives		6
		30

#### Business Administration Requirements

The Master of Business Administration will require 48 units of credit. Required courses include: all required courses in an MBA program; MOR 548 Competitive Advantage Through People (3); one marketing elective chosen from among MKT 512 Marketing and Consumer Research, MKT 525 Consumer Behavior and MKT 560 Marketing Strategy and Policy (3); and additional graduate business electives sufficient to bring the total units completed in the Marshall School of Business to at least 48. Dual degree students may not count courses taken outside the School of Business toward the 48 units.

#### Program Adaptation

The USC Davis School of Gerontology will waive 18 units of electives, plus GERO 593 Research Methods (4 units) and GERO 589 Case Studies in Leadership and Change Management (4 units), which are required in the regular M.S. program. Students will be exposed to research and professional issues in business administration course work.

#### Gerontology and Pharmacy

The emerging impact of the elderly on the health care system has created a need for health care providers who understand the unique needs of the elderly. As drug therapy remains the primary therapeutic option for chronic disease, the demand for prescription drugs will continue to rise. There is a demand for pharmacists who are equipped to meet the pharmaceutical care needs of this population. Geriatric pharmacy is recognized as a specialty, with board certification through the Commission for Certification in Geriatric Pharmacy. The Pharm.D./M.S., Gerontology program will provide extensive education and training in the unique health care needs of older adults. It will allow student pharmacists with a career interest in geriatrics or gerontology to work with health care planning or delivery organizations to develop and implement progressive pharmaceutical care programs for the elderly.

#### Application and Admissions Requirements

Students who intend to pursue the dual Pharm.D./MSG degree must be accepted by both programs. This includes having completed a baccalaureate degree from an accredited college or university with a minimum G.P.A. of 3.0 and a minimum equivalent GRE score of 1000. Students will not be given special consideration for admission to either program because they are applying for the dual degree. Students may apply to the dual Pharm.D./M.S. degree program in two ways. First, they may apply at the time they submit their Pharm.D.

application by concurrently submitting applications to both programs. Students, who elect this approach, must identify themselves on both applications as potential dual degree students. Students who are admitted to both programs will be offered admission to the Pharm.D. and will be offered admission to the dual degree program. Second, students can apply to the dual degree by submitting an application to the M.S. in Gerontology program during their first year of enrollment in the Pharm.D. prior to the M.S., Gerontology published application deadline. Students, who elect this approach, must apply through the School of Pharmacy. Students admitted to the M.S. program using this approach will be offered admission to the dual degree contingent on passing all courses in their first year of the Pharm.D. with a minimum 3.0 G.P.A. Students accepted to the dual degree program must maintain a minimum 3.0 G.P.A. in their gerontology and Pharm.D. courses.

#### Graduation Requirements

Students must complete all requirements for the Pharm.D. and M.S. degrees as listed in the catalogue with a minimum cumulative 3.0 G.P.A. Students must complete 32 Gerontology units as indicated. The Pharm.D. degree course requirements are listed in the School of Pharmacy section.

Gerontology requirements		Units
GERO 520	Life Span Developmental Psychology	4
GERO 530	Life Span Developmental Sociology	4
GERO 540	Social Policy and Aging	4
GERO 555	Integrating Gerontology: A Multidisciplinary Approach	4
Gerontology electives*		16
		32

\* Choose four of the following (16 units): GERO 475, GERO 496, GERO 508, GERO 519, GERO 522, GERO 543, GERO 550, GERO 554 or GERO 591.

#### Gerontology and Public Administration

The M.S./MPA dual degree offers the student interested in management of agencies and institutions the opportunity to gain in-depth knowledge of the administrative and organizational processes and management skills necessary for the effective delivery of services to older persons. See the Price School of Public Policy, for course requirements.

#### Gerontology and Health Administration

Students can specialize in health care administration (profit and non-profit) through the dual degree with the Price School of Public Policy's Health Administration Program. See the Price School of Public Policy, for course requirements.

#### Gerontology and Planning

The M.S./MPI dual degree is one of few in the nation which combines the knowledge of the older population with the skills needed to plan services for older people. The MPI prepares the graduate for the responsibilities involved in development of public and private institutions and programs. The M.S. indicates a special focus on the older person and the skills to analyze and design programs for this growing population. See the Price School of Public Policy for course requirement.

#### Gerontology and Law

The M.S./J.D. dual degree combines the knowledge of the older population with understanding of the legal system. The program prepares graduates for a number of roles in both public and private sector organizations. Students are required to complete 110 units of course

work, 74 from the Gould School of Law and 36 from the Davis School of Gerontology. The first year is devoted to required law courses, and the second, third and fourth years combine gerontology and law courses. To earn the J.D., all students (including dual degree students) must complete 35 numerically graded law units at USC after the first year. The associate dean may make exceptions to the rule for students enrolled in the law school honors program. See the Gould School of Law for course requirements.

### Gerontology and Social Work

The M.S./MSW dual degree offers the student interested in direct service or community organization the credentials most valued in clinical and therapeutic practice. Taken in connection with the social work degree, the M.S. focuses course and fieldwork on the older person and prepares the student for social work with older persons and their families.

In the M.S./MSW dual degree program, the student enrolls primarily in the first year program of the USC School of Social Work. During the summer session, courses are taken in the USC Davis School of Gerontology. Second year courses are taken in both schools and fieldwork during the second year is taken in the School of Gerontology. The research course is taken through the School of Social Work in the student's concentration area. The School of Gerontology will waive GERO 589 Case Studies in Leadership and Change Management (4 units) and GERO 555 Integrating Gerontology: A Multidisciplinary Approach (4 units) because students enrolled in this program have a primary professional focus on social work.

Gerontology Requirements		Units
GERO 510	Physiology of Development and Aging	4
GERO 520	Life Span Developmental Psychology	4
GERO 530	Life Span Developmental Sociology	4
GERO 540	Social Policy and Aging	4
GERO 591	Field Practicum	8
Gerontology electives		8
		32

Social Work Requirements		Units
SOWK 503	Human Behavior and the Social Environment I	3
SOWK 505	Human Behavior and the Social Environment II	3
SOWK 534	Policy and Practice in Social Service Organizations	3
SOWK 543	Social Work Practice with Individuals	4
SOWK 545	Social Work Practice with Families, Groups and Complex Cases	2
SOWK 562	Social Work Research	3
SOWK 586ab	Field Practicum	3-3
SOWK 587ab	Integrative Learning for Social Work Practice	2-2
SOWK 611	Leadership in the Social Work Profession and Organizations: Theory and Practice	3
		31

In the second half of the social work program, students may enroll in one of four concentrations: Health; World of Work; Mental Health; or Community Organization, Planning and Administration (COPA). All students are required to take SOWK 611 Leadership in the Social Work Profession and Organizations: Theory and Practice. Required courses are selected based on the chosen concentration as follows:

Health		Units
SOWK 631	Advanced Theories and Clinical Interventions in Health Care	3
SOWK 632	Program Planning and Evaluation in	3

Health Care		
SOWK 636	Policy in the Health Care Sector	3

World of work		Units
SOWK 671	Micro Practice and Evaluation in Work-Related Environments	3
SOWK 672	Context and Policies of Social Work Practice in Work Environments	3
SOWK 673	Macro Practice and Evaluation in Work-Related Environments	3

Mental Health		Units
SOWK 605	Human Development and Mental Health	3
SOWK 625	Evaluation of Research: Mental Health	3
SOWK 645	Clinical Practice in Mental Health Settings	3

Community organization, planning, and Administration (COPA)		Units
SOWK 629	Evaluation of Research: Community Organization, Planning and Administration	3
SOWK 639	Social Policy for Managers, Planners, and Community Organizers	3
SOWK 648	Management for Community and Social Services	3

Course selection is done only with an academic adviser's approval.

### Program Adaptations

The School of Gerontology waives 12 units. The research course is taken through the School of Social Work in the student's concentration area, and GERO 593, the research course, and GERO 555 are waived as well as one elective. The School of Social Work waives 12 units.

## Doctor of Philosophy in Gerontology

The purpose of the Ph.D. in Gerontology is to provide research training in the multidisciplinary field of aging. The program is designed to enhance the potential of able students to make scholarly and professional contributions to the field of gerontology through research and teaching. To obtain this goal, the Ph.D. in Gerontology provides (1) high level rigorous research training, (2) the acquisition and application of scientific knowledge in the field of aging and (3) the development of leadership skills.

### Admission Requirements

Applicants for admission to the doctoral program must meet the following requirements:

(1) Recipient of a bachelor's degree from an accredited college or university by anticipated enrollment date.

(2) Academic promise, as evidenced by above average achievement in previous undergraduate and graduate education. A minimum GPA of 3.5 on all prior graduate work is required. In addition, a 3.25 GPA in an appropriate undergraduate major and a baccalaureate degree are required.

(3) Personal qualities compatible with high level performance in gerontology and indicating a potential for leadership in the field. This includes a strong commitment to developing a scientific research program. Applicants to the Ph.D. program must submit a resume of professional

and academic experience, three letters of reference (academic and professional), a statement of objectives and examples of written work.

(4) Satisfactory performance on the Graduate Record Examinations – existing test scores may be submitted if the GRE has been completed no more than five years prior to the date of application. A satisfactory score on the Verbal and Quantitative GRE is required. Students should also provide scores from the Analytic exam.

(5) Submission of application materials as required. Instructions for application to the Doctor of Philosophy in Gerontology may be obtained by contacting the Davis School of Gerontology.

### Degree Requirements

#### Course Requirements

Students must complete a minimum of 60 units of course work (with at least 24 of these units being completed in residency at USC), as well as additional dissertation units (at least 4 units) as required. All students will take courses in three areas: a set of required core courses, research courses and elective courses.

There are two tracks in the gerontology Ph.D. program: the social, behavioral, and policy track and the biology of aging track.

Students will be advised about course selection during the first year by the Ph.D. committee. As soon as a student has selected a specialization (e.g., biology, psychology, sociology/demography, policy), an advisory committee of appropriate faculty will be appointed. The purpose of the advisory committee is to help the student in the selection of courses and a research agenda; to monitor the student's progress; and to insure preparation for the qualifying examination.

### Basic Scientific Core

Each track has a basic scientific core. The core for the social, behavioral and policy track stresses the physiological, psychological, sociological and policy dimensions of individual and population aging. The scientific core for the biology of aging track emphasizes the understanding in the molecular, cellular and physiological mechanisms of aging and age-related disease. Special emphases include mechanisms associated with chronic disease such as cancer, heart disease, Alzheimer's and Parkinson's disease, and the interplay between genetic and environmental influences.

#### Social, Behavioral and Policy track required core courses

courses	Units	
GERO 610	The Aging Society	4
GERO 613	Health and Aging	4
GERO 620	Psychology and Aging	4
GERO 645	Politics and Policy in an Aging Society	4

#### Biology of Aging track required core courses

courses	Units	
BISC 502ab	Molecular Genetics and Biochemistry, or	8
BISC 502ab	Molecular Genetics and Biochemistry, and	8
BISC 505	Genomics and Molecular Genetics, or	4
NEUR 524	Advanced Overview of Neurosciences, and	4
NEUR 531	Molecular and Cellular Neurobiology, and	4
NEUR 532	Systems and Behavioral Neurobiology	3

## Research Core

A second core area focuses on development of research skills. For social scientists this includes research design, methods and statistics. Biologists will learn methods appropriate to biological sciences as well as research design and statistics. Students in the social, behavioral and policy track are required to take GERO 593 and GERO 640 and at least one additional statistics course – generally from another department – on the student's research focus. Students in the biology of aging track are required to take GERO 593 and GERO 590 (2 semesters of 4 units).

Students in both tracks are also required to take two semesters of GERO 592, a research seminar in which participants will develop and carry out their own research. This course is generally taken after the first year.

## Elective Core

A third core involves electives that allow students to create a concentration in a particular area of focus or analytic field of inquiry. Students should select courses in consultation with their adviser. Courses should be selected to provide in depth knowledge in the specialized area or general knowledge in the field of gerontology. A number of gerontology courses can be taken as electives.

Students should note that Gerontology courses at the 600 level are usually offered only every second year. Students are encouraged to review the course schedule to determine how to best complete these courses in a timely manner. Successful completion of the required course work does not complete the educational experience of the student. Students are expected to enhance their exposure to research by attending the colloquium lecture series, working on research with a faculty member and presenting original research at the annual meeting of the Gerontological Society of America and other professional meetings.

## Foreign Language Requirements

There are no foreign language requirements for the Ph.D. program.

## Transfer Credits

Students with master's degrees or prior graduate course work in gerontology can petition to apply the credit toward required courses. Petition for credit will be based on the Graduate School's policies and requirements for "transfer of credit" and on approval by the doctoral advisory committee. Transfer credits toward the Ph.D. requirements will be limited to 20 units and must be credits taken within 10 years of entering the program.

## Time Limit

The normal time for completing the Ph.D. is four to five years (without a prior master's degree). The first two years will consist of required and elective courses. The third year will consist of electives, the Ph.D. qualifying exams and completion of the dissertation proposal. The final year(s) will involve the completion of the dissertation. The maximum time to complete all requirements for the Ph.D. degree is eight years from the first course at USC applied toward the degree.

Students who have completed an applicable master's degree at USC or elsewhere within five years of the proposed enrollment in the Ph.D. program must complete the Ph.D. in six years.

## Screening Procedures

When students have completed a minimum of 16 but not more than 24 units of doctoral course work, the doctoral advisory committee assesses their performance

through a screening process and makes a decision regarding their ability to continue in the program. If the student is granted permission to continue, a guidance committee is established.

## Qualifying Exam Committee

The qualifying exam committee is composed of five faculty members, at least three from the School of Gerontology. The function of the qualifying exam committee is to oversee the development of the student's academic progress through the qualifying examination, including the preliminary dissertation proposal.

## Qualifying Examination

As a prerequisite for candidacy for the Ph.D., students must pass a qualifying examination, which is multidisciplinary and comprehensive in nature and that necessitates independent study beyond course requirements. Students must have completed at least 28 units of course work in the doctoral program with a GPA of at least 3.25 before attempting the qualifying exam. The exam is designed to test mastery of knowledge and scholarly skills and to test readiness to undertake independent research. If the student fails this exam, it may be repeated one time. When the exam is successfully completed, the student then must develop and have a dissertation proposal approved before the student is officially admitted to candidacy for the Ph.D. degree.

## Doctoral Dissertation

Upon admission to candidacy, a dissertation committee is established which consists of three members of the faculty, some of whom may be from the qualifying committee.

The dissertation committee has responsibility for providing guidance and consultation during the research process, approving the dissertation, conducting the final oral examination, and recommending the candidate for the Ph.D. degree. The doctoral dissertation should make an original contribution to the development of knowledge and theory in gerontology.

## Final Oral Examination

Upon approval of the final draft of the dissertation by all members of the dissertation committee, the candidate must pass a final oral examination. Upon successful completion of this final examination, the committee recommends the candidate to the Graduate School for award of the Ph.D. degree.

## Doctor of Philosophy Biology of Aging

Application deadline: December 1

The purpose of the Ph.D. in the Biology of Aging is to provide interdisciplinary research training in an age-centric environment. Students will focus on basic mechanisms of aging as well as translational research related to medical applications. Students will approach aging as a major risk factor for disease.

## Admissions Requirements

Applicants must have a bachelor's degree from an accredited four-year college or university preferably in one of the biological sciences. Applicants are evaluated by their transcripts and GPA; scores on the GRE General Test, three letters of recommendation and a statement of interest.

## Degree Requirements

### Course Requirements

The Ph.D. in the Biology of Aging will provide each student with detailed knowledge and expertise in the biology of aging. The Ph.D. in the Biology of Aging requires the following courses (GERO 519, GERO 600, GERO 601, GERO 602, GERO 603, plus 8-10 units from the list of suggested electives or other department approved courses). A minimum of 60 units is required, consisting of formal courses, seminars and research credit. At least 24 of the minimum 60 total units required are to be formal graduate course work (lecture or seminar courses).

### Screening Examination

After completion of the core Biology of Aging course work (GERO 519, GERO 600, GERO 601, GERO 602 and GERO 603) during the first year, the student's degree progress is discussed and evaluated by a screening committee composed of members of the gerontology faculty and the Buck Institute as well as the student's faculty adviser. The purpose of this written and oral evaluation is to determine competence to continue graduate study and identify areas to be strengthened prior to the qualifying examination.

### Qualifying Examination

By the end of the third semester, students should choose a guidance committee consistent with the requirements of the graduate school composed of gerontology faculty, Buck Institute faculty and one outside member. This committee will conduct the qualifying exam and provide guidance during dissertation research. The chair of the committee will serve as the principal adviser. Students should consult extensively with each committee member regarding subjects to be covered in the exam.

The qualifying exam consists of written and oral parts. Both parts must be finished before the end of the fifth semester. For the written exam, the adviser will consult with each of the members of the qualifying exam committee. The written part will incorporate evaluation and synthesis of existing knowledge related to the topic areas, creation of a set of experiments to test a relevant hypothesis, and interpretation of anticipated results. The oral exam consists of an oral defense of the written part and will be conducted with a month of the written part of the qualifying exam.

### Doctoral Dissertation

The dissertation is based on original, publishable and significant research conducted independently by the student under the guidance of the dissertation committee. Upon admission to candidacy, a dissertation committee is established which consists of three members of the faculty, some of whom may be from the guidance committee, one of whom must hold his or her primary appointment outside of the Davis School of Gerontology.

The dissertation committee is responsible for providing guidance and consultation during the research process, approving the dissertation, conducting the final oral examination, and recommending the candidate for the Ph.D. degree.

## Foreign Language Requirements

There are no foreign language requirements for the Ph.D. in the Biology of Aging program.

## Transfer Credits

Students with a master's degree of prior graduate course work in biology can petition to apply the credit toward required courses. Petition for credit will be based

on the Graduate School's policies and requirements for transfer of credit and on approval by the doctoral advisory committee. Transfer credits toward the Ph.D. requirements will be limited to 20 units and must be taken within 10 years of entering the program.

## Courses of Instruction

### Gerontology (GERO)

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

**GERO 200 Gerontology: The Science of Adult Development (4, FaSp)** Introduction to adult development through the lifespan; biological, psychological, and social processes; gerontology as a career for the future.

**GERO 310 Physiology of Aging (4, Fa)** Effects of normative aging processes on homeostatic mechanisms and how these changes relate to development of disorder and disease in later life. Lecture and discussion. Prerequisite: BISC 220L or BISC 221L.

**GERO 320 Psychology of Adult Development (4, FaSp)** How psychologists study thinking, memory, emotions, personality, and behavior, and how people change in these throughout adulthood to old age. Recommended preparation: *PSYC 100*.

**GERO 330 Society and Adult Development (4, FaSp)** How social relationships affect adults of different ages; the changing contract across generations; interaction of culture, race, family and social values with adult development.

**GERO 340 Policy, Values, and Power in an Aging Society (4, FaSp)** How Americans' political values affect public policy. Studies of landmark legislation to explore the social contract between generations and role of governments in social welfare.

**GERO 350 Administrative Problems in Aging (2 or 4, Fa)** Analysis of the skills, approaches and issues involved in the planning, development, and implementation of programs directed at meeting the needs of older persons.

**GERO 380m Diversity in Aging (4)** Exploring diversity in the older population and variability in the human aging process.

**GERO 385 Transitions in Adulthood (2 or 4)** An exploration of the critical issues and transitions in the adult years, including careers, relationships, parenthood, and major turning points for personal development.

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

**GERO 402 Housing for the Elderly: Policy, Programs, and Design (2)** An overview of housing policies, programs and design for the elderly, including analysis and evaluation of past, current and proposed government programs.

**GERO 411L Physiology, Nutrition, and Aging (2 or 4)** Explores nutritional needs and the physiological, psychological, and sociological relationships to nutrition. Laboratory experiments in assessment and evaluation.

**GERO 412L Exercise and Aging: Principles and Programs (2 or 4)** Physiological, psychological, and sociological aspects of exercise. Laboratory involvement in assessment and evaluation of fitness.

**GERO 414 Neurobiology of Aging (4, Fa)** Age-related changes in nervous system structure and function; relationship of brain changes to changes in cognitive function and perception; Alzheimer's and Parkinson's diseases. Lecture and discussion. Prerequisite: BISC 220L or BISC 221L.

**GERO 415 Neuroaffective Disorders of Aging (4, Sp)** Methods of studying, evaluating, and treating cognitive, psychiatric, and behavioral problems associated with medical conditions of old age.

**GERO 416 Health Issues in Adulthood (4, Sp)** Physiological, psychological, and social health problems of adults as they are impacted by health choices throughout life.

**GERO 421 Managed Care for an Aging Society (4, FaSp)** Examines key legislation, policies, practice, and outcomes of managed care and how population aging affects health care delivery.

**GERO 423 Psychological Development through Autobiography (4)** Introduction to autobiography as a source of individual psychological development, with emphasis on integration of cognitive, emotional, and decision processes.

**GERO 435m Women and Aging: Psychological, Social and Political Implications (4, FaSpSm)** Problems and resources of the middle-aged and older woman in a changing society; including discrimination, stereotypes, employment, social interaction, etc.

**GERO 437 Social and Psychological Aspects of Death and Dying (2 or 4, FaSp)** Introduction and critical survey of the current issues, concepts, and research of the social and psychological aspects of death and dying.

**GERO 440 Biodemography of Aging (4)** Consideration of the biological and social-cultural factors that govern the evolution of life spans and the life of humans and selected animal models. Prerequisite: BISC 112 or BISC 113 or BISC 120 or BISC 121; recommended preparation: *statistics*.

**GERO 451 Policy and Program Development in Aging (4)** Policy trends and changing roles of local, state, and federal agencies in planning, managing, and evaluating programs in comprehensive, coordinated systems of service for older persons.

**GERO 452 Economic Issues and the Aged (2 or 4)** Analysis of economic factors associated with the aged; implications for individuals, society, and the economy; lifecycle economics, retirement, income maintenance, and social security.

**GERO 461 Seminar in Molecular and Computational Biology (2, FaSpSm)** (Enroll in BISC 461)

**GERO 470 Aging and Business (4, Fa)** An introduction to the dynamic roles of business in an aging society focusing on workplace issues, marketing to mature consumers, and careers for business gerontologists.

**GERO 475 Ethical Issues in Geriatric Health Care (4)** Biomedical ethical issues that are encountered in working with geriatric patients. Examination of ethical theory and the application of theory to clinical settings.

**GERO 481 Case Management for Older Adults (4, Fa)** Overview of the concepts, characteristics, skills, and clinical issues of case management in a variety of settings serving older persons.

**GERO 483 Global Health and Aging (4, Fa)** Overview of the impact aging populations will have on

global institutions from a variety of perspectives. Examination of public health policy issues.

**GERO 490x Directed Research (1-8, max 12)** Individual research and readings. Not available for graduate credit.

**GERO 491 Practicum (2-8, max 8, FaSpSm)** Supervised experience in one or more community agencies. Graded CR/NC.

**GERO 492 Senior Seminar (4, Sp)** An in-depth integration of major research and professional themes in the study of human development and aging.

**GERO 493 Longevity and Death among Ancient and Modern European Populations (Italy) (2, SpSm)** The discoveries of ancient humans and bodies that have been preserved illuminate the connection between diet, health, and disease.

**GERO 495 Practicum in Geriatric Care (4, FaSpSm)** Supervised experience in a geriatric health care setting which allows students to put theories and ideas into practice. Graded CR/NC. Lecture, discussion, and fieldwork.

**GERO 496 Introduction to Clinical Geriatrics (4)** Medical problems of older adults emphasizing common geriatric syndromes, chronic illness, and alternative approaches to primary health care of older persons and their families. Upper division standing. Prerequisite: BISC 220L or BISC 221L.

**GERO 497abc Honors Seminar (2, 2, 2-4, FaSpSm)** Advanced study of empirical approaches in gerontology. Preparation, progress, presentation, and evaluation of Senior Honors Thesis research. Prerequisite: *standing in Gerontology Honors Program*.

**GERO 498 Nutrition, Genes, Longevity and Diseases (4, Sm)** Examines the role of nutrition and genes and the impact each has on longevity and diseases, particularly diseases related to aging. Offered in Genoa, Italy.

**GERO 499 Special Topics (2-4, max 8, FaSpSm)** Examination of special topics in the area of gerontology.

**GERO 500 Perspectives on a Changing Society: An Introduction to Aging (4, Fa)** Analysis of physical, mental, and social age-related changes as well as implications of population aging trends for individuals and society.

**GERO 501 Applied Legal and Regulatory Issues in Aging (4, Fa)** Analysis of shifting legal and regulatory issues affecting the delivery of aging services.

**GERO 502 Marketing and Shifts in Consumer Decision Making (4, Fa)** Branding, marketing, and consumer behavior through examination of established, transitioning and emerging aging services and organizations.

**GERO 504 Current Issues in Aging Services Management (4, Sp)** Basic skills needed for an executive working in an aging services environment. Recommended for entry level administrators and managers.

**GERO 505 Behavioral and Social Consequences of Design and Environment (4, Fa)** Examination of the behavioral and social consequences of design and the environment to create a more satisfying physical environment for both frail and active older adults.

**GERO 506 Technological Innovations in Aging (Gerontechnology) (4, Sp)** Reflections on shifts in

preferences for aging in place and the market ramifications of innovations in science and technology on older consumers and service providers.

**GERO 507 End of Life Care (4, Sp)** Examination of programs related to end of life care. Cultural competencies in working with a diverse population on end of life issues.

**GERO 508 The Mind and Body Connection through the Lifespan (4, FaSpSm)** An introduction to mind-body processes involved in healthy aging. Examines the interplay of emotions, beliefs, and behaviors in shaping health-relevant biological processes.

**GERO 510 Physiology of Development and Aging (4, Sp)** Examination of lifespan physiology of human development, growth, and aging; major emphasis in the physiology of the later years and implications for health maintenance.

**GERO 512 Communicating Nutrition and Health (2, Fa)** Overview of current understanding of the dietary and nutritional needs of individuals across their lifespan. Open only to graduate students.

**GERO 513 Fundamentals of Nutrition (3, Fa)** A study of the principles of human nutrition throughout the life cycle. Current topics and controversies in nutrition and health are discussed. Open only to graduate students.

**GERO 517 Advanced Therapeutic Nutrition (3, Fa)** Introduce students to a variety of methods related to the planning, assessment, and interpretation of clinical and epidemiological studies related to nutrition. Open only to graduate students.

**GERO 518 Current Topics in Clinical Nutrition (4, Sp)** Discuss various factors that affect nutrition and aging. Topics include allergies in nutrition, food toxins, weight factors, and prevention and treatment of multiple organ systems. Open only to graduate students.

**GERO 519 Recent Advances in Neurobiology and Endocrinology of Aging (2 or 4)** Theories of the biology of aging and the effects of age on functional integrity of the total organism.

**GERO 520 Life Span Developmental Psychology (2 or 4, FaSm)** Behavior from adulthood to old age; study of major components of behavior such as perception, cognitive processes, personality, intergenerational relationships, sexuality, and life styles.

**GERO 522 Counseling Older Adults and Their Families (2 or 4, Sp)** Theory and application of assessment and intervention techniques with older adults and their families. Topics include: treatment modalities, psychopathology, ethical and legal issues, brain disorders.

**GERO 529 Seminar in Psychological Aspects of Aging (2 or 4)** Psychological changes in the later years; perception; sensory factors; intelligence and memory; psychophysiological measures; personality; psychopathology.

**GERO 530 Life Span Developmental Sociology (4, Sp)** Life span perspective on the sociological theories of marriage and the family, inter-generational relationships, work and retirement, and other forms of social organization.

**GERO 540 Social Policy and Aging (4, Fa)** Major legislation and programs; examination and analysis of policy-making and political processes affecting development and implementation of programs for older persons.

**GERO 541 Health Care Delivery Models: Comparative Approaches (4)** Examination of current trends and future prospects of finance and reimbursement

systems. Topics include major legislation and programs such as Medicare and Medicaid.

**GERO 543 Continuum of Care: Systems Perspective (4)** Structural and organizational aspects of institutional and community programs; public policies, fiscal management, regulation, administration; obstacles to interagency coordination; the continuum of care.

**GERO 550 Administration and System Management in Programs for Older Adults (4, Sp)** Application of theories of administration and system management to public and volunteer programs and services for older adults including residential institutions and community programs.

**GERO 551 Applied Policy Skills in Aging (4, Sp)** An overview and application of techniques and approaches used in the definition and analysis of policy problems in aging. Prerequisite: *GERO 540*.

**GERO 554 Evaluation: Incorporating Evidence-Based Practices (4, Sp)** Examination of the evaluation of health and service delivery in aging services industries.

**GERO 555 Integrating Gerontology: A Multidisciplinary Approach (4, Sp)** Aging (commonalities and distinctions) as addressed by biologists, psychologists, and sociologists. Topics include research perspectives, normative aging, functional decline and disability, and aging and society.

**GERO 556 Program Development (2 or 4)** Principles and procedures of assessing needs, collecting resources, designing activities, and implementing programs for older people in a variety of community and institutional settings.

**GERO 560 Micronutrients, Health, and Longevity (4, FaSpSm)** Explores the role of micronutrients related to nutrition health and longevity. Open only to senior and graduate students.

**GERO 570 Corporate Policies and Aging (4)** An introduction to the evolving roles of corporations in an aging society including such topics as retaining older workers, retiree benefits, and the mature consumer.

**GERO 585 The Aging Family (2 or 4, Sm)** Family processes and structure in families with aged persons will be reviewed, including marital and family therapy and intervention strategies.

**GERO 589 Case Studies in Leadership and Change Management (4, Fa)** Examination of case studies of issues affecting the aging services industries and the role industry leaders play in reacting to change.

**GERO 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.

**GERO 591 Field Practicum (1-12, max 12, FaSpSm)** Supervised experiential learning in one or more organizations that serve older adults; includes a regularly scheduled seminar. Graded CR/NC.

**GERO 592 Multidisciplinary Research Seminar in Aging (2, max 8, FaSp)** Multidisciplinary perspectives on current research in gerontology, including physiology, neurobiology, health and medicine, psychology, sociology, and public policy. Topics will change each semester.

**GERO 593 Research Methods (4, Fa)** An introduction to research methods and their application to gerontology including problem formation, research design, data collection, descriptive and analytic statistics, interpretation, and report preparation.

**GERO 594abz Master's Thesis (2-2-0, FaSpSm)** Credit on acceptance of thesis. Graded IP/CR/NC.

**GERO 599 Special Topics (2-4, max 8, FaSpSm)** Examination of special topics in the area of gerontological study.

**GERO 600 Geroscience: Molecular and Cellular Biology (4, Fa)** Emphasizes the molecular and cellular biology of aging and age-related pathology and other aspects of basic aging research, including evolutionary biology, demography, epidemiology and bioinformatics.

**GERO 601 Molecular Genetics of Aging (4, Sp)** Explores concepts of molecular and genetic regulation of healthy aging, lifespan, and age-related diseases.

**GERO 602 Seminar on Discoveries in Biogerontology (2, Sp)** Critical analyses of primary scientific data and interpretations presented in the literature.

**GERO 603 Research Integrity (2, Fa)** Explores scientific integrity, mentoring, scientific record keeping, authorship, peer review, animal and human experimentation, conflict of interest, data ownership and intellectual property, and genetic technology.

**GERO 610 The Aging Society (4, Sp)** The interaction of demographic and economic processes, with emphasis on how the contemporary nature of these interactions influence public policy response to an aging population.

**GERO 613 Health and Aging (4, Sp)** Examination of changes in health related to age, changes in health in populations over time, and the key health issues facing older persons.

**GERO 614L Laboratory Rotations in the Biology of Aging (4, 8, FaSp)** Mandatory organized laboratory rotation. Allows students to participate in laboratory activities. Designed to help select dissertation advisor and research.

**GERO 620 Psychology of Aging (4, Fa)** Overview of topics in the psychology of aging. Includes research and theory bearing on cognitive, personality, adaptive, and social processes throughout the adult life span. Open only to doctoral students. Recommended preparation: *undergraduate course work in psychology*.

**GERO 628 Theories of Aging (4)** An examination of the nature and adequacy of existing explanations of aging. Focus will be on psychological, sociological, and biological paradigms, and on the epistemology of theory.

**GERO 640 Data Analysis Strategies (4, FaSpSm)** Hands-on experience in developing and testing hypotheses using various types of databases, data management and analysis strategies and written presentation of findings. Recommended preparation: *GERO 593*.

**GERO 645 Politics and Policy Processes in an Aging Society (4, Fa)** Dynamics of the policy-making process in the context of aging policy in the United States; focus on the political system and its social dynamics.

**GERO 666 Free Radical Chemistry, Biology, and Medicine (4, Fa)** Explores the chemical and physical-chemical nature of free radicals and related reactive species. Examines the roles of antioxidants and how they work. Recommended preparation: *Course work in biology and chemistry*.

**GERO 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.

**GERO 794abcdz Doctoral Dissertation (2-2-2-2-0, FaSpSm)** Credit on acceptance of dissertation.  
Graded IP/CR/NC.